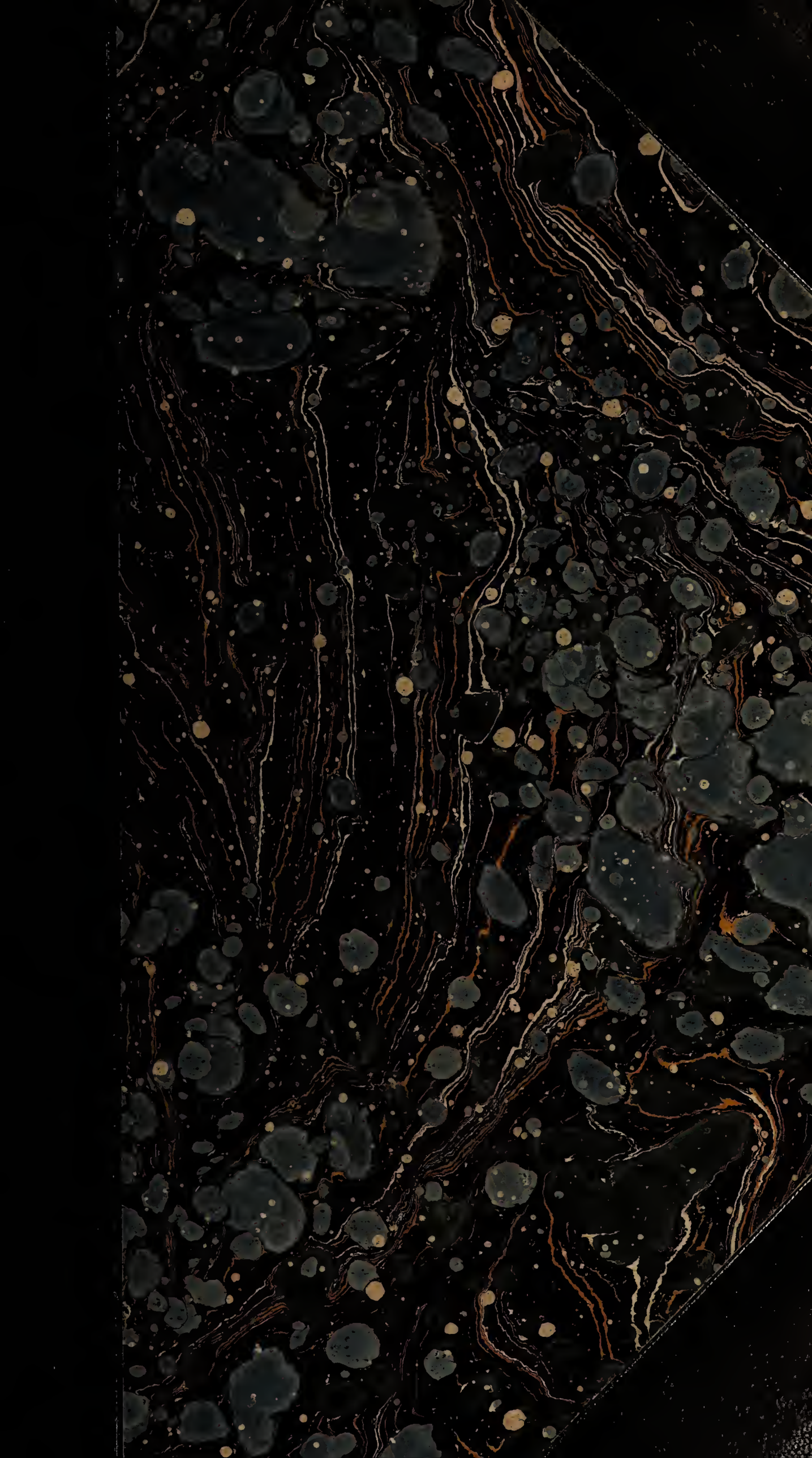

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ANDERSON'S

QUARTERLY JOURNAL

OF THE

MEDICAL SCIENCES.

BEING A NEW SERIES OF

THE QUARTERLY JOURNAL OF FOREIGN MEDICINE

AND SURGERY.

VOL. I.

LONDON:

Printed by C. Smith, 163, Strand.

FOR JOHN ANDERSON, MEDICAL BOOKSELLER,

40, WEST SMITHFIELD.

1824.

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ANDERSON'S

QUARTERLY JOURNAL

OF THE

MEDICAL SCIENCES.

N°. I. JANUARY, 1824. VOL. I.

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The alterations which have been made, in commencing a New Series of this Journal, are in conformity to the wishes of the greater number of our Subscribers, many of whom have repeatedly solicited us to embrace the leading Improvements in the Medical Sciences, whether these were made at home or abroad. It is our intention, accordingly, to select every thing worthy of notice, which may come under the observation of both our British and our Foreign Correspondents; and, also, to proportion, as much as possible, the space allotted for each article, to its practical importance.

*** *Books for Review and Communications (post paid), are to be addressed to the Editor, at the Publisher's.*

ANDERSON'S

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N° I. JANUARY, 1824. VOL. I.

ART. I. *Medico-Chirurgical Transactions, published by the Medical and Chirurgical Society of London.* Vol. XII. Part II. pp. 597; plates. Longman and Co., London, 1823.

IN the review of the first part of this volume, in a former series of this Journal, it was remarked, that the proposal of the Society to give prizes for superior Essays was not likely to operate as a stimulus to contributors, so long as the circumstance was so indefinitely published, assigning neither a subject for competition, nor the value of the prize to be given. The remark has been verified by the event; for a whole year has now elapsed, another series of Essays has been published, and still we hear nothing of the prizes mentioned in the resolution of the President and Council. We venture to predict, however, that were the resolution made definite, it would soon come into vigorous operation. Were, indeed, an Essay of superior merit to be estimated no higher than that of procuring admission into the Society, it would stimulate many junior practitioners to exert themselves worthily, and procure for the Society many valuable papers, which otherwise might never be heard of. We merely give these as hints of what would be effectual in bringing their dormant resolution into active operation.

The first paper, by Mr. T. Brayne, of Banbury, is an account of two cases of biliary calculi, of extraordinary dimensions. The patient, a widow, aged 55, was of spare thin habit, and melancholic temperament, who had been always healthy till within the previous twelve months, when great languor and prostration of strength unfitted her for her occupation of a sick nurse. In

six months subsequent to this, she experienced attacks of pain in the epigastrium, which returned every two or three weeks, for five or six times, and was succeeded by slight and temporary jaundice.

"About a month after the last attack of pain, she became the subject of continued fever. At this time (Nov. 26, 1820.), I found her labouring under the following symptoms: a small quick pulse, a foul tongue, anorexia, almost total privation of sleep, constipated bowels, scanty secretion of high coloured urine, and great mental irritability, almost amounting to complete alienation. She suffered no local pains whatever. In this state she continued, with little or no variation, until the 26th of October, when she was suddenly seized with severe pains in the left iliac region, accompanied by considerable tenderness on pressure. This urgent symptom continued unmitigated for sixteen or eighteen hours, after which she became suddenly easy, and soon passed a natural alvine evacuation, which contained a calculus of extraordinary size. This was followed in a short time by an abatement of the febrile symptoms, but she remained in a state of low melancholy for some months, from which she did at length recover, under the gentle and long continued influence of mercury on the system."

The calculus was something of the form and dimensions of a pigeon's egg, weighing 162 grains, and measuring in its transverse circumference $3\frac{3}{8}$ inches, in its long diameter $1\frac{3}{8}$ inches, and in its short diameter $1\frac{1}{8}$ inches. Its specific gravity just exceeded that of distilled water, and it was of a yellowish colour, variegated with brown, like an aggregation of soiled particles of spermaceti. The surface was rough and tuberculated, and internally it exhibited a radiated fracture, but no appearance of concentric laminæ, differing in this from the usual biliary or intestinal calculi.

"In the early part of the present year (1822), I was again desired to visit this patient, and I found her labouring under the usual symptoms of hydrothorax, in a severe degree, which, she informed me, had been gradually increasing for some time. No biliary derangements had occurred in the interval, so far as I could learn. The common course of treatment was adopted for her relief, but with no success; the urinary secretion could never be materially augmented, and she died on the 4th of March last, about a year and a half after she had voided the calculus. I obtained permission to inspect the body on the second day after death. On opening the abdomen, the hepatic system was the first object of examination. The liver was of the usual size and appearance in respect to colour, and seemed to vary from natural structure in nothing but in being rather more close and solid in its texture, and more resisting to the impression of the finger. The cystic and hepatic ducts were of the usual dimensions, but the gall-bladder itself was smaller

and very much thickened, containing only a little pale unhealthy bile. It had contracted a strong adhesion, about the size of a shilling, to the duodenum, close to the pylorus. There was no uncommon appearance of vascularity. On removing these parts from the body, a communicating aperture, large enough to admit a crow quill, was discovered in the centre of the adhesion."

It has been usual to explain the passage of large biliary calculi from the dilatation of the duct; and it seemed, from the comparative mildness of the symptoms in this case, that this was more probable than the long and painful process of adhesive inflammation, and subsequent ulceration of the parietes concerned. This, however, the dissection proved to be the manner of its transition, for there can be no doubt, Mr. Brayne thinks, that the aperture in the adhesion was once large enough to give passage to the stone in question, and it may serve to put pathology right when it is anatomically wrong.

Mr. Brayne was called to Grace Adams, aged sixty-five, and married. She had laboured for five days under obstinate constipation, and he found her in an almost hopeless condition, the abdomen much inflated, cold and damp extremities; she vomited every thing that was given to her, and the pulse at the wrist was scarcely perceptible. The only favourable symptom was the absence of the facies hippocratica. By persevering in the exhibition of croton oil, in the form of pill, the constipation was overcome, and the urgent symptoms yielded to colocynth, castor oil, &c., and the patient got better. A few days after Mr. Brayne discontinued his visits, the patient brought him a large biliary calculus, which had escaped while she was sitting at breakfast; and in a week afterwards another, which, it is curious to mention, seemed to fit the former as if they had been lodged in apposition. The one weighed 159 grains, the other 176 grains, and they both swimmed in distilled water.

"A comparison of these cases will lead to several interesting points of remarks. In some respects they run nearly parallel. The sex and ages of the patients;—the comparatively slight degree of hepatic irritation excited;—the nocturnal returns of the pain in the epigastrium;—the trivial jaundice in one, and the total absence in the other;—the severity of the symptoms of the intestinal obstruction;—and the subsequent dropsical affections of the thorax, are obvious coincidences."

The next paper, by Mr. Henry Earle, an indefatigable contributor, is on the important subject of local irritation, in the production of diseases resembling cancer, and other morbid alterations of structure. The author concludes from the experience he has already had, "that by early directing our views to coun-

teract the influence of local irritation, we may often succeed in restoring healthy action; whilst, in more advanced stages of disease, we may be induced to resort to operations with far greater confidence of success than the appearance and progress of the complaint would warrant, independently of any such exciting causes."

On Diseases of the Lips.—The daily, and almost unavoidable irritation of the external apertures of the body, is particularly prone to produce an indurated unhealthy aspect in the case of sores or of morbid action. Herpes præputialis will, from this irritation, often become indurated, and assume all the other characteristic marks of chancre. In the same way, ulcerations about the mouth will, if neglected, often assume the induration, and other marks of carcinoma, and in advanced life will exhibit a very appalling aspect, though when taken early may admit of cure; but if they have made much progress, our author advises excision. Of this he gives a case in illustration, and adverts to several others, in which the operation was successful.

"From my own experience, and from witnessing the success of others, I may venture to affirm, that few cases afford greater promise of success than those corroding ulcers, with scirrhous edges, which occur about the lips. The operation is so simple, and the wound so constantly unites by the first intention, that in cases that do not readily yield to local and constitutional treatment, it is far better to resort to it, and often the deformity will be less than when the ulceration heals without any operation. One circumstance may be worth adverting to, both in operating for the removal of a diseased portion of lip, and in hare-lip operation. It is better to introduce first, the point that is nearest the edge of the lips, the exact coaptation of the red margin of the lip is thus rendered more certain, and where this is nicely attended to, it is hardly possible, at a slight distance, to perceive that any operation has been performed."

Diseases of the Nose and Face.—The alæ of the nose and lower margin of the nostril, are sometimes liable to diseases like cancer, which are greatly aggravated by any catarrhal affection. The use of snuff also, sometimes produces very irritable and suspicious looking disease. In the case of an old gentleman, a sore of this kind, having many of the symptoms of cancer, was cured by abandoning the snuff, and using mild applications. In other parts of the face, such as in the vicinity of the eye, intractable ulcers often arise from local irritation of a similar kind. Many diseases of this kind may be traced to the irritation, or the slight cuts and excoriations from shaving.

"Where, however, the disease remains stationary, or inclined to

spread, it will be better to remove the morbid portion, either with the scalpel, the potassa fusa, or the arsenical paste, as may appear best adapted to the individual case. In one case of this description, the morbid disposition was kept up by the tendency which the hair had to coil up beneath the integument ; several very painful pimples were thus formed, which put on a very angry ulcerated appearance. This took place after an oblique cut from a razor, which had probably divided several pairs near their roots, which continued to grow, but could find no exit, as the wound was immediately closed. By carefully extracting each hair, some of which were above half an inch in length, the irritation soon subsided."

" In all these diseases occurring in the integuments of the face in persons advanced in years, if the character does not improve under proper treatment, it is advisable to remove the disease, which may be done in a large majority of cases, with every prospect of permanent success."

Diseases of the Tongue.—When any morbid action has been set up in the tongue, its great mobility, and its almost continual use, together with its contact with the teeth, often irregular and decayed, are quite sufficient to interrupt our efforts of cure, while the complaint is aggravated by accumulated incrustations, and often puts on a carcinomatous appearance. Mr. Earle does not advocate excision in such cases till every method of constitutional, combined with local, treatment, has been found unavailing.

" Under the head of local treatment, I would place in the first rank, the removal as much as possible of all local stimuli, such as the taking away a decayed or projecting tooth, the shielding the tongue from pressure, by covering the teeth with wax, or soft lint, with *complete privation of the faculty of speech,* the frequent cleansing the mouth with a stream of water, or any medicated liquor from an elastic gum bottle, instead of gargling or washing the mouth by any muscular efforts ; the employment of the most mild unirritating food ; and in bad cases, the prohibition from the use of solid food, substituting in its room, milk and strong broths, which may be thrown into the stomach through a tube passed down the œsophagus, and even in some cases introduced through the nostril."

" As local applications to the ulcerated surface, few are more efficacious than a solution of nitrate of silver, or very much diluted nitric acid, in the proportion of three or four drops to the ounce. Occasionally, a solution of arsenic is very useful. Any of these may be thrown upon the ulcer with a syringe, which will be found better practice than keeping lint moistened with any lotion, constantly applied to the part."

" This plan of cleansing wounds with a stream of water thrown on the part from an elastic gum-syringe, I have very frequently found extremely useful, not only in ulcers of the tongue, but in any

painful ulcerations about the tonsils or fauces; in which cases, it frequently happens that the effort of gargling is productive of great pain, and is very insufficient to remove the sloughs, and inspissated sputum, which is often very tenacious and difficult to be got rid of. All that is required, is for the patient to hold his head over a basin, with his mouth open, and by compressing the elastic bottle he will throw a stream with considerable force on any part of the throat to which he may wish to direct it. This may be readily done by patients in the most enfeebled state."

Diseases of the Prepuce.—These are frequent in old people, with elongated foreskins, which prevent them from cleaning away the secretion from behind the corona glandis; give lodgement to irritating quantities of urine; and ultimately excoriation and phymosis is established, while the natural passage is obliterated, and the urine dribbles away through the ulcerated apertures. An intractable disease is thus established, for which, at length, the knife is the only remedy.

"The removal of the whole indurated mass is the only remedy, and this operation may be resorted to even when the characters of the complaint have assumed a very malignant aspect, with confident expectations of success. In three instances, in persons much advanced in life, in which I had an opportunity of seeing the patient for many years subsequent to the operations, the complaint never returned. Two of them died of gradual decay, being at the time of the operation more than eighty years of age, and one still survives."

"The removal of the whole penis is the operation which is generally resorted to in these cases, but from the examination I have made of the parts after amputation, I doubt whether the removal of the diseased integument would not, in the majority of cases, be equally efficacious. When we look to the period of life at which this disease usually occurs, it would be a matter of little importance whether a portion of the body of the penis were removed or not, and the quantum of pain is probably nearly the same; but this is a circumstance of great consequence with reference to the after treatment, as great inconvenience is often experienced from the powerful contraction which takes place in the cicatrix, at the extremity of the urethra."

Mr. Earle concludes his paper with the recommendation of a very bold sort of practice.

"With the intention of obtaining a total respite from labour, and the removal of local stimulants, I would propose, in obstinate cases of disease in the urethra, in very irritable constitutions, to puncture the bladder above the pubes."

The succeeding paper, also by Mr. Earle, may be considered as a sequel to his remarks on local irritation, namely, the chim-

ney sweepers' cancer, arising from the local irritation of soot in constitutions prone, often hereditarily, to the disease. It seldom occurs till the age of thirty, and only one instance is known to have occurred among climbing boys before puberty. A case is recorded by Sir James Earle in the works of Pott, of a gardener, who had the disease on his wrist, from distributing soot to destroy slugs. There is no remedy but the knife. Mr. Pott was against the operation when the testicle was affected; but Mr. Earle has known two successful operations in these circumstances.

Mr. Hammond in the next paper advises, in cases of parturition where the head of the fœtus has to be operated upon, to divide the medulla oblongata or the spinal cord, as the extraction of the cerebrum does not produce immediate death. In a case in which he extracted two ounces of cerebrum, the child lived forty-six hours, often crying strongly, and sunk apparently in consequence of hemorrhage from the wound.

In the succeeding paper, Dr. H. S. Roots gives a case of bronchocele in a young lady—where the tumour was the size of an orange, successfully treated with iodine, on the plan of Coindet. He began with the formula

℞ Pottassæ Hydriodat. gr. xxxiv
Ceræ albæ ʒij
Adipis Suillæ ʒjss. M.

The size of a garden bean to be rubbed into the tumour night and morning. He afterwards increased the iodine to fifty grains, and gave the tincture of iodine internally, in the dose of twenty drops, twice or thrice a day as the stomach could bear it. The patient got quite well in a few months.

Dr. R. M. Kerrison has given some very curious passages from Prosper Alpinus and Fabricius Hildanus, of the early methods of extracting calculi from the bladder in males by dilating the urethra. The dilatation was effected by blowing into a canula, into the perforation of which the calculus was brought by the finger introduced into the rectum.

Dr. Gregory, of the Small-pox Hospital, has given one of the best papers on small-pox after vaccination which we have seen, notwithstanding the great interest the subject has excited, and the numerous publications to which it has given rise. We shall therefore make copious extracts from the more interesting parts of it.

"In a very large proportion of cases, the same immunity is afforded by vaccination, as by once undergoing the genuine variolous disease,

"In cases where the vaccine virus fails to impart a *perfect* se-

curity from the future influence of the variolous poison, it serves, at least, to modify *certain* of its effects. These it is important to investigate. It is in this manner that small-pox, after vaccination, occasionally proves fatal; the chief evidences of which are delirium, inflamed eyes, stupor, or restlessness, and disposition to erysipelas and gangrene.

"In the investigation of the causes of small-pox subsequent to vaccination, it would be improper to overlook the remarkable connection that subsists between the degree of perfection in the vaccine cicatrix, and the violence of the secondary disease."

"When the scar on the arms is perfect, that is distinct, circular, radiated, and cellulated; but, above all, when it is small, so that it may be covered with a pea;—the secondary affection (if from peculiarity of habit, or any other less ascertained cause, it does not occur) will be slight, and hardly deserve the name of a disease."

"On the other hand, whenever the scar is large, and bears the mark of having been formed by high local inflammation, and wants the other distinctive characters just enumerated, the chance of small-pox occurring in after-life will be greater, and *cæteris paribus*, there will be a stronger likelihood of its proving severe."

"This principle receives a striking confirmation from what takes place in *re-vaccination*. Where the cicatrix is perfect, it is impossible, or nearly so, to reproduce the vaccine disease in any thing like its genuine form. In proportion to the imperfection of the cicatrix, will be the degree of approximation of the *second* to the *primary* vaccination."

"These considerations tend to establish, as a pathological principle, that the occurrence of small-pox, subsequent to vaccination, is dependent upon intensity of the vaccine influence, as primarily exerted; and they lead to the belief, that the appearance of the cicatrix may be taken as a measure of that intensity."

"From the register kept at the Small-pox Hospital, it appears that in the year 1810, the proportion of cases of small-pox, succeeding vaccination to the whole number of admissions, was as 1 to 30;—in 1815, 1 to 17;—1819, 1 to 6;—in 1821, 1 to 4;—and in 1822, 1 to 3½, the proportion rapidly advancing every year."

Mr. Pope, of Oxford-street, has given some useful experiments on the superiority of the several kinds of sarsaparilla. The whole medical efficacy of the plant appears to reside in the bark, for the root, deprived of its cortical part, contains only pith and tasteless fibre, yielding nothing but insoluble mucus, and a very small portion of extract. The best sarsaparilla is that lately brought from Jamaica, but probably grown in the Spanish Main, in a wild state. The external bark is deep red, the bark next to this, or rete mucosum, is also of a deep red colour, which distinguishes it at once from the other varieties.

In giving the details of a successful case of stricture of the urethra, treated by incision, Mr. J. M. Arnot remarks, that

"The only arguments which may be advanced against resorting to the treatment by operation, are its danger and severity. As for the first of these, no surgeon thinks of danger when he cuts down upon a stricture, in order to heal a fistula in the perineum; and surely there is no additional risk in the cases we are considering. With respect to the severity of the process, this will scarcely be taken into account by those who have witnessed the distressing state of a man with stricture, so narrow that he can only pass his urine in drops, or in a thread-like stream; or by a surgeon who knows that such a state will gradually wear out the patient's health, even should he not be attacked with total retention of urine, which he is daily liable to, and will then of necessity require the performance of this or a still more severe operation, under unfavourable circumstances for its success."

Mr. Langstaff has given the history of a very interesting case of ascites connected with utero-gestation, in a lady, aged 39, pregnant of her 9th child, which was successfully treated by operation. It was a very critical and serious point, to decide about the seventh month of pregnancy, whether premature labour should be brought on, or the operation of tapping be performed. The first was determined on by consultation, and the liquor amnii, small in quantity, let off. But no symptoms of labour followed, and death seemed fast approaching, when Mr. Langstaff cut down to the peritoneum a little below the umbilicus, and evacuated about 25 pints of fluid. Three days after she bore a dead child by an easy natural labour, and in a fortnight was considered out of danger. Mr. Langstaff justifies his bold practice by a case of Scarpa's, given in the first series of this Journal, vol. I. 249.

Extraction of Calculi by Dilatation of the Urethra. By Sir A. Cooper.—In addition to the case of the Rev. M. Buller, from whom Sir Astley extracted more than 80 calculi with Weiss's dilator, he here gives three more recent cases. The first is by Mr. Brodie, who extracted at different times upwards of sixty calculi from a gentleman, aged 70. One of these was too large to pass, but was extracted in fragments. The second case is given partly by Sir Gilbert Blane and partly by the patient himself, Sir William B— aged 67, from whom Sir Astley extracted at different times two calculi, one weighing 17¼ grains, and the other 54 grains, both consisting chiefly of lithic acid. The last, it was found very difficult to extract, and Sir Astley thinks it would be better, in similar cases, to extract by incision into the urethra, posterior to the glans, and anterior to the scrotum. In another case, of a mariner, aged 66, Sir Astley extracted at different times, with very little pain, about 30 calculi. Since then he has extracted calculi from another patient, and even

by dilating the urethra, gave them a passage with the urine. With respect to the original invention, Sir Astley remarks with great justice, that if it were known before, it was certainly never turned to any good account.

Dr. W. Philip seems to be very much at a loss for subjects to write upon, though he is determined to write. His late papers in the Journal of Science, are a mere cento from his published works, and in the paper introduced here on the powers of the circulation, we are presented with the echo of an echo—his own experiments, and those of Dr. Hastings, over again. When Dr. Philip shall take the trouble of giving us something new, we shall analyse with pleasure; but we cannot enter with spirit upon a twice told tale.

In an elaborate Essay on phlegmasia dolens, Dr. David D. Davis criticises the pathology of White, Trye, Hull, and others; and, upon the basis of morbid anatomy, endeavours to prove that the disease is proximately caused by inflammation of the veins of the parts affected. Like all systematic theorists, he presses the point too exclusively, and though we admit he is in some measure right, and cannot too highly prize his anatomical investigation of the subject, we are disposed to allow more weight than he does to the opinions of Dr. Hull, which seem to be founded on a much more philosophical and enlarged view of the morbid changes in the affected parts. Besides, the cases adduced by Dr. Davis, are far from disproving Dr. Hull's account; while at the same time Dr. Hull expressly states that the "the inflammation may be communicated to the large blood vessels," the exclusive proximate cause given in the paper under review. Except, therefore, in the dissections, which are of considerable value, we do not see that there is much novelty in the paper. The treatment recommended, is precisely the same as that to be found in all the text books, though it is magisterially laid down by Dr. Davis, in a style of very objectionable egotism, as if he were the only proposer. "*I* am happy to have it in my power," he says, "to assure the society," that local treatment is the best means of resolving the inflammation. We are persuaded that even the youngest member of the society did not require his assurance on a point so long well established.

On the Effects of Stricture of the Urethra, particularly in a sacculated state of the bladder. By JOHN SHAW, Esq.—Mr. Shaw commences this valuable paper by stating four interesting pathological facts.

"1st, I have not, in more than a hundred dissections which I

have made of diseases of the urethra, seen a stricture or narrowing of the canal, posterior to the ligament of the bulb; nor have I been able to find one example of stricture beyond this part among those preserved in the College Museum."

"2d, In almost every instance where a narrow stricture has existed for some time, in any part of the urethra anterior to the ligament of the bulb, I have found the membranous and prostatic portions dilated to three or four times their natural size."

"3d, The ducts of the prostate, which are naturally very small, are always more or less enlarged when there has been a stricture, or a long continued irritation of the canal."

"4th, When such stricture as causes occasional retention of urine has existed for some years, the bladder is found to be not only thickened, but often at the same time sacculated."

From the first of these it follows, that if our instrument is obstructed at a point posterior to the ligament of the bulb, we ought not to infer a stricture; and hence both from this and the second, we should not, on meeting with such an obstruction, attempt to push the instrument further in. The third might lead to the inference, that the instrument, if obstructed, had passed into one of the dilated ducts of the prostate, which often form a complete labyrinth. The using force in such cases, though recommended even by Dessault, must always be hazardous and improper.

As the healthy urethra becomes suddenly narrow at the bulb, while the curve of the canal suddenly changes, the ligament being higher than the sinus of the bulb, it must follow, in cases of slight inflammation, that spasmodic action will be excited by passing a bougie, the instrument will be obstructed, and lead to the false supposition of a stricture. Besides, when the bougie is obstructed at the bulb, its upper surface may be so cut, or indented, by being pressed against the lower edge of the ligament, as to have exactly the same appearance as that which has been considered as an unequivocal proof of there being a stricture at that point where the instrument has been stopped. Many strictures at the bulb may probably, indeed, have originated in the inflammation consequent upon ineffectual attempts to pass the instrument, while the internal membrane was irritated or inflamed.

Mr. Shaw goes on to infer, that stricture is very frequently followed by sacculated state of the bladder or prostate, often leading to the disastrous consequences of recto-vescical fistula, bursting of the urethra, and sloughing of the scrotum and penis, peritonitis, irritative fever, and death.

In treating such cases, Mr. Shaw, very justly we think, con-

demns the instrument invented for dilating strictures, as quite useless in cases of difficulty, for many strictures will not permit any thing thicker than a hog's bristle. In the cases in which the dilator might be used, the common means would be no less successful, and more simple. He advises the operation of cutting through the stricture, introducing a catheter from the glans, and endeavouring to make the urethra entire by allowing the wound to granulate over the catheter. The operation is easy, the delay of it may prove fatal to the patient—a circumstance of daily occurrence in London; and when the stricture is divided, the principal object is attained. The great difficulty of the operation is the existence of false passages, which may be cut down upon instead of the stricture; and in passing the catheter afterwards into the bladder, we may again be misled by other false passages. The worst almost that can happen, is a fistulous sore; but this is known to be much more manageable than spontaneous fistula.

The paper was illustrated by numerous interesting preparations of strictures, false passages, dilated ducts, sacculated bladder, &c., from the Museum in Great Windmill-street.

Mr. Swan, of Lincoln, in a paper giving several cases of injuries of the pelvis, remarks, that

"When the urethra or bladder is wounded, and the bones of the pelvis at the same time are broken, it appears to me that there can be no chance for the recovery of the patient, unless an incision is immediately made to give it a free discharge to the urine; for if any of it is detained, it must destroy the bones, and prevent their union; or, at least, it must give rise to extensive exfoliations. At the same time, any loose portions of bone should be removed, as it is most probable, the urine will have prevented their re-union."

Dr. Harry Leake Gibbs, of St. Petersburgh, in the succeeding paper relates a case of axillary aneurism, in which the operation of tying the subclavian artery was successfully performed on a strong plethoric cooper, aged 35. The ligature came away on the twelfth day, and the patient was nearly well and walking about on the twenty-first day from the operation, the wound being all healed to a small spot in the centre, from which a little lymph was oozing. Pulsation not perceptible, but the arm warm and well nourished; appetite and sleep good.

"The arm and upper part of the shoulder must have been nourished, in the first place, by anarstomosing vessels coming from the neck and right scapula; but especially from the extreme branches of the left epigastric, inosculating with those of the left mammaria externa, by which the blood at first returned to the axillary artery below the tumour, and so onwards."

In the next paper, Mr. Powell relates a case of ruptured uterus during parturition. The fœtus was extracted by Dr. Davis, by turning and craniotomy ; and after very severe suffering from hypogastric pain, difficulty of breathing, &c. the patient got well.

Illustrations of the Medical Properties of Quinina. By JOHN ELLIOTSON, M.D. &c.—We were among the first in this country to call the attention of the profession to this medicine, in the last series of our Journal. Since that period, it has been extensively tried, and in many cases has been found of great power. Dr. Elliotson commences with an outline, from the French journals, of the history of the substance, and its exhibition, both of which we gave more copiously in a former series, and shall not repeat. Dr. Elliotson prescribed the sulphate of quinina in the form of pills :—

" I may add, that, although in doses of five grains every six hours, I have never observed any disturbance of the functions, a dose of ten grains occasioned vomiting in the three only instances in which the medicine was carried to this extent from its not strengthening the patients in ordinary doses."

The following case seems to argue strongly in behalf of its tonic powers :—

" A poor Irishwoman, half-starved, and flooding, was brought into St. Thomas's, labouring under severe typhus, on the 19th of June. She was supported by plenty of beef-tea and milk ; the epigastrium, forehead, and occiput were blistered ; and hyd. cum creta was prescribed in doses of ℈j, and sometimes ℈ij, every six hours, till the mouth grew sore. The delirium and stupor were entirely subdued, and the tongue became clean and moist, but the debility increased hourly. The face became ghastly, and the body sunk lower in the bed. I ordered three, and soon five, grains of sulphate of quinina to be given every six hours, and the diet to remain as before. A striking amendment was observed the next day, and she speedily recovered. After being convalescent some time, the medicine was omitted ; but, when I thought of discharging her, she suddenly relapsed into extreme prostration of strength, passed her urine and fæces again involuntarily, and grew delirious ; but the tongue remained clean and moist. The two blisters to the head were repeated, and the sulphate ordered as before, milk and beef-tea *ad libitum,* continuing to be her diet. The amendment was not so sudden, but from the first day of recurring to the medicine, the debility ceased to increase ; in a few days she clearly gained strength, and was soon convalescent. After taking the full diet of the house, and a pint of porter daily, for two or three weeks, she was discharged perfectly strong and well."

Dr. Elliotson was equally successful with the French physi-

cians in exhibiting the medicine in intermittent; so that its efficacy appears to be proved.

"It is of the greatest moment to have the sulphate genuine, as its high price, three or four guineas an ounce, makes it an object with unfair dealers to adulterate it. It should be intensely bitter, as white as snow, and extremely light, resembling benzoic acid in its appearance."

Having been successful with the sulphate, Dr. Elliotson next tried the quinina itself in its alkaline form.

"The article was prepared for my use by digesting cinchona in a very dilute solution of sulphuric acid (℥ij to four gallons of water), straining, and then adding magnesia by saturation, by which means the quinina was precipitated from the acid, mixed with tannin and extractive matter, and sulphate of magnesia remained in solution. The precipitate was again dissolved in sulphuric acid, again precipitated, and finally washed and dried. A pound of cinchona cordifolia furnishes about an ounce of this impure quinina, or about two drachms of pure sulphate of quinina by another process, in which quinina is obtained pure, by means of alcohol, previously to its formation into a sulphate, whence the greater real expence of this article."

The simple quinina was tried in eleven cases of intermittent, with the same success as the sulphate, with the favourable exception that Dr. Elliotson never observed derangement of the stomach, induced by doses of the impure preparation employed, in doses as large as ten grains every six hours. There is not, according to our author, any unpleasant narcotic effect produced by either of the medicines, and they frequently succeed when the bark itself, in any of its more antique preparations, fails.

"After the extraction of the quinina, the yellow bark is as tasteless as so much wet saw dust; and I presume the same is the case with the pale, after the extraction of the cinchonina, and with the red, after the extraction of both."

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* The excellent paper on the Anatomy of the Eye, by Dr. Jacob, is analysed in another part of this Number.

ART. II. *Essai Physiologico-Pathologique sur la nature de la fièvre, de l'Inflammation, et des principales Neuroses, appuyés d'Observations Iratiques, et suivi de l'Histoire des Maladies observèes a l'Hopital des Enfans Malades, pendant l'annee* 1818. *Par* ANT. DUGES, D.M.P. 2 *tomes* 8*vo. pp.* 1082. *Paris,* 1823.

Here we have another admirer of Hippocrates; a young man who has made improvements on the ideas of Cullen, and kept himself remote from the subtilties of Darwin; who has combated Galen's doctrine of revulsions, so much acted upon, at the present time, by Broussais; and who has quoted both ancient and modern authors, merely to confirm what were originally his own thoughts, or to sanction his experience.

With the laudable intention of making his labours more easily understood, the author has explained, in some introductory chapters, the meaning of several terms which he employs. *Organism,* he informs us, is in some respects synonymous with *animal economy, living body,* &c.; and as the *organs* have all a mutual connection, the name of *system* has also been given to the *organism.* In the same manner, the powers which animate these organs are reciprocally blended, and also constitute a *system, and this system of organic powers is what we call nature.* These powers have all a reciprocal influence upon each other; and if the activity of one of these be diminished or increased, there is a principle within us which is constantly endeavouring to restore it to its natural level; and this principle is what we call the *healing power of nature,* or vis medicatrix naturæ, a power denied by some physicians, merely because they are unable to comprehend its essence. This principle having been called, by Van Helmont and others, an intelligent power, may have occasioned many to be sceptical concerning it; and where, on the other hand, the idea of its intelligence has prevailed, it has been thought not only liable to error, but it has been called treacherous; and every thing possible has been done to counteract its efforts, often to the great detriment of the patient. All this danger would have been avoided had physicians represented it, as Hippocrates has done, as a mere tendency to equilibrium, the necessary consequence of a *consensus Venus,* or universal agreement of parts. When a disease terminates fatally, it is not this power which should be blamed, but the morbific cause. It is the business of the physician, then, to find out the organ which is most disposed to allow the escape of the morbific matter, or to restore, by every means in his power, the equilibrium

of the system. Had the efforts of nature always the same appearance, or were they equally intense, it would be an easy matter to know and to regulate them; but this is far from being the case. The composition and intimate structure of the organism is continually changing; but even in its primitive state, it is infinitely varied in different individuals, so that there is a vast number of different *natures*. These modifications of organism, says M. Duges, constitute what I call *habit*, which with me is equivalent to *mode of organization*, or idiosyncrasy. It must not be confounded with *custom*, which is but one of the effects of habit. In its different states, habit is *normal* or *morbid; born with us*, or *acquired; general* or *partial;* and more or less *intense*. Born with us, it constitutes what is called *temperament, complexion, constitution;* whilst *education* and *custom* are the effects of it when acquired.

Such is a short abstract of our author's prolegomena. In the first volume of his work, he treats successively of habit and innervation (phenomena of the nervous system), morbid habit, the effects of medicines, fever, and inflammation. In the second, he brings forward a number of observations, or cases illustrative of fever and inflammation, and a history of the diseases which occurred at the Hospital *des Enfans Malades*, in 1818. The text of the first volume occupies one half of it; the notes occupy the other. The author, in our opinion, would have done much better to have united them, which would not only have spared a great deal of trouble to the reader, but would have made his work much more perspicuous. The notes, however, are learned and ingenious, and afford abundant proofs of the author's extensive reading and acquirements. To give any thing like a complete analysis of such a work is impossible, and we must be satisfied, therefore, with presenting its most prominent features to our readers.

When all the organs of the body are in harmony with each other, their state is *normal*, or they are in *equilibrium*. This equilibrium is not always perfect, even in a state of health; but as nature in that state is continually endeavouring to restore it, it is never long nor seriously disordered. In whatever manner habit is influenced by external impressions, or whatever be its nature, the nervous system may be termed its parent; and in the same system are situated all the phenomena of those diseases which we call internal, particularly *pyreaiæ* and *neuroses*. In treating, therefore, of the phenomena of nerves, or *innervation*, we give at the same time a history of normal and morbid habit.

In treating of innervation, our author uses the term of *neu-*

rartery, instead of arterial capillary, from the supposition that the ganglionary nerves are intimately blended with the texture of these arteries, and consequently in close contact with the nerves of the encephalon. In this way he accounts for the sudden influence exerted by the passions on the skin; for the sensibility which is sometimes acquired by parts naturally insensible; and for the influence of the nervous system on secretion. In this way M. Duges thinks we may also simplify the theory of idiopathic inflammation.

Of the *normal* state, or *health*, there are three principal modifications; *equilibrium*, or moderate action, *superaction*, and *subaction*. These the author has illustrated at some length, but we think it unnecessary to follow him, and shall merely observe that superaction is the maximum of activity, and that in subaction the direct and indirect debility of Brown are included. To those varieties of innervation which, even in the most healthy persons, continually reciprocate with each other, M. Duges has given the name of nervous oscillations; and he has illustrated them as they belong separately to the cerebral and ganglionary systems, or are common to them both. The oscillations of the former are rapid, and those of the latter slow; and both are rarely affected at the same time by exciting causes. In the evening, when subaction begins to lay hold of the cerebral, the superaction of the ganglionary system become manifest; and in the morning the two systems are generally in a state of equilibrium.

When our organs are in a state of exaltation (excitement) or hyposthenia (debility), morbid habit is undoubtedly present. It is the diathesis of the Italian physicians. The same state of health, which the patient previously enjoyed, does not always follow its removal. Exaltation or hyposthenia, is that condition of the nervous system, in which stimulants have the power of exciting it to superaction. It is the same as erithism, irritation, super-excitement, or super-excitability. It is a diseased state, and may exist in very feeble bodies, although it is generally found in those of the sanguine temperament. It precedes, and disposes to, the greater number of active diseases. When the hyposthenic state is once established, a very small stimulus, which in health might have passed unnoticed, will instantly, in a manner, induce superaction. Extraordinary stimulants, of course, will act with much more violence. Superaction is either general or partial, or mixed. It is general in what we call simple essential fever; it is partial in simple inflammation; and it is mixed in fevers which are complicated with inflammation. In simple general superaction, innervation is in

an excited state: sensibility is more acute, the neurarteries expand, vigour is increased, and heat augments. In partial superaction, the expansion of the neurarteries is made evident by the swelling and redness of the part. Mixed superaction, our author has divided into two kinds. 1. Primitive general superaction, sometimes the brain is its seat; sometimes the ganglionary nerves; and sometimes the neurarteries. The depletion produced occasionally by its evacuations is often so salutary, that they have been regarded as the efforts of an intelligent principle inherent in the body; and hence they have got the name of *Crises*. In this division are comprehended the old inflammatory and eruptive fevers, the eruptions of European typhus, the parotids and buboes of malignant and pestilential fevers, and even in many instances the croup. When those partial but preponderating superactions have taken deep root, they become so superior to the general one, that, even should general subaction supervene, they may at a later period produce a new superaction in the whole system. 2. Primitive partial superaction. Here local superaction is paramount; but it is sometimes joined to other functional injuries, which make a great change in the progress of the general phenomena. Thus the croup and inflammation of the lungs, heart, and brain, often produce inaction, or death, before there is the least apparent decrease in the activity of the neurarteries. The same effect has been produced, though early, by excess of pain; so, in extensive burns, the superaction has been followed by an irrecoverable subaction, although the inflammation of the skin was as bright as ever.

Our author now enters at great length into the doctrine of *Metastasis*, which in his opinion is altogether different from *derivation*. But we fear our readers are nearly tired of this subject. In the opinion of M. Duges, the repulsion of an inflammation is never dangerous, unless the patient be in a state of general subaction or have a tendency to it. Neither should we attempt to recal by stimulants, inflammations not constitutional, when they have been made to disappear by nature. When measles suddenly disappear, and pneumonia follows, will the application of stimulants to the skin make the inflammation of the lungs less severe?

Morbid subaction is the same as collapsus, or adynamia (want of power). Its causes and varieties, we need not mention. What has been called fleeting subaction, may be observed in the shivering which precedes severe fevers and considerable inflammations. In children, instead of shivering, we observe stupor, spasm, paleness, cold, and immobility; in short a fleeting subaction analogous to the shivering of adults. This state

generally leads to reaction. It is exceedingly rare, and is occasioned, for the most part, by causes intensely sedative. Caustics and fire suddenly induce gangrene rather by excess of stimulus than by chemical action; for comparatively they have little effect on dead skin.

Durable subaction is general or partial. The first may be observed in the latter periods of severe fevers, and it is of three kinds. In some pestilential fevers, in asphyxia, occasioned by deleterious effluvia or electric shocks, in poisoning by very active agents, and in diseases attended by excess of pain, the first kind of it is rapid in the extreme, and seems to be the effect of a single but excessive superaction. Its pathognomonic marks are well known. The second kind, or intermediate subaction, is a characteristic of those fevers, which M. Pinel calls adynamic or gastro-adynamic, mucoso adynamic, or ataxic; it often constitutes the last period of what were formerly named putrid, bilious, mucous and nervous fevers. It may occur, however, after any fever. Exaltation exists even with this adynamic, for violent reaction will follow the administration of too strong stimulants, and inflammations (of the parotid for instance) will sometimes show themselves. The third kind is *Ethisis* or slow adynamia. It is characterized by emaciation and other symptoms of hectic. Partial adynamia is generally the consequence of inflammation. There is local exhaustion along with some degree of general exaltation. It occurs in the sudden gangrene of carbuncle, pestilential buboe, and malignant pock; in slow and gradual resolution, suppuration, or ulceration; in chronic inflammation; and in schirrous, cancer, tubercle, and melanosis. These four states of partial adynamia, our author has expatiated upon at some length.

Duration and intensity distinguish morbid from normal oscillations. By their means, M. Duges has been enabled to explain, apparently to his own satisfaction, the varied phenomena of intermittent fever. We must not follow him, however, either on this subject, or through his second division of morbid habit, *hyposthenia* (sub-irritation, sub-excitability, apathy). It is chiefly met with in the lymphatic temperament, and is the state opposite to exaltation; in short, a continual tendency to subaction. It may be produced by changing an active life into one of moderate activity, by the use of an abstemious instead of stimulant diet; and by passing from a hot to a temperate climate. It may also follow the sudden drying up of an issue. It is seldom universally present. Confined to the ganglionary system, it may be joined to increase susceptibility, and great mobility of the cerebral nerves, constituting, in our au-

thor's opinion, that peculiar temperament of delicate females and literary men, which is called *nervous*. Here a fright or a severe disappointment will produce flatulence in the stomach, difficulty of breathing, and syncope; and if torpor be propagated to the cerebral nerves, deep melancholy ensues, and tears are shed abundantly, often from very trifling causes. The affections of the cerebral system may be often counterfeited, those of the ganglionary system never; and an attentive physician will be always able to distinguish them. Hyposthenia may exist, for a short time in a single organ, whilst the rest of the system is in a state of exaltation. Oscillations also exist in it, though more rarely than in exaltation; in the latter they are *febrile*, in the former *spasmodic*.

Our author next enters on the consideration of medicines, and trying to distinguish them from poisons, he comes, after using a great deal of his own peculiar verbiage, to the sage conclusion that medicines cure and poisons kill; acknowledging, however, that the dose makes the only real distinction betwixt them. The most natural division of medicines is into stimulants, sedatives, tonics, (compounded of these three) mixed, and specifics; but the action of medicines is much modified by the constitution of a person and his state of health. In enumerating his stimulant medicines, our author observes that their peculiar property is not in all of them equally evident and incontestable.

When we observe, says M. Duges, that local superaction is propagated over the system with such astonishing rapidity, how is it possible to believe in the doctrine of derivations, which is in direct contradiction to that of sympathy? How is it possible that the same blister which extends its irritating action over every part of the system, can at the same time concenter in one spot, sensibility and irritability? No theory ever gave rise to so much abuse as that of derivation; thus a purgative has been said to be beneficial in some protracted cases of enteritis, by removing irritation from the capillary blood vessels, where it was fixed, to the excretary capillaries! Neither in this supposed derivation does a greater pain remove a less; it only marks it, as indeed is the opinion of Hippocrates. But the theory of sympathy, also, has been abused. Many medicines, it is true, seem to act through the medium of the nerves alone, but there are many facts to the contrary. Opium, after having produced its usual effects in the stomach, has been vomited apparently in the same state in which it was swallowed; but this, when thrown into the stomach of another animal, has been found quite inert.

Sedatives, as their name imports, have a tendency to produce

subaction and hyposthenia; but before this happen nutrition must have time to change, under their influence, the fundamental principles of habit. These act upon the nervous system by abstracting some habitual stimulus, and change the organization only in a secondary manner. But the sedatives affect the very fabric and organization of textures, and their action, therefore, is more permanent. Others directly debilitate by evacuation.

Our author now speculates on the action of tonics. After the use of cinchona and mineral acids, the venous blood becomes redder, thicker, and more adherent; and shows all the strongest marks of inflammation. A similar effect or a degree of tanning has been produced on the solids; thus, after a long continued use of cinchona, the heart, stomach, and intestines have become contracted and thickened; and it is thus that astringents arrest hemorrhage and nervous oscillations. The astringent particles, our author thinks, are actually inserted in the interstices of textures. But when adynamia is extreme, astringents are useless, unless they are combined with stimulants.

Specifics, M. Duges divides into evacuants, alteratives, and specifics, properly so called; and he has shown that the two first classes are either sedative, stimulant, or tonic. In examining the third class, he shows that anti-scorbutic and anti-scrofulous medicines are stimulant, and the febrifuge tonic. Anthelminthics also, and carminatives are stimulant, or sedative, and act in general by restoring energy to the intestinal canal. After a careful examination of all the medicines usually called specific, our author concludes, 1st, That there is no specific property in medicines, and that they act as stimulants or narcotics, as emollients or tonics; 2d, That, nevertheless, the chemical composition of medicines and the various combination of their active principles give to each of them a peculiar manner of stimulating or benumbing, of relaxing or constringing the same organ; and 3d, That an *elective harmony* exist between certain parts of the body and certain medicines.

Fever, says M. Duges, may be regarded as a general exaltation of the nervous system, either idiopathic or sympathetic; but every part of that system is not at all times equally affected; on this subject our author has a curious and elaborate note, which our limits will not allow us to transcribe. The predisposing causes of fever, he tells us, are always stimulant: debilitating causes do not produce the fever, but only make it more severe. When a sedative cause induces fever, there is generally a previous exaltation. Thus, in the spring, the return of light and heat gives a kind of exaltation to the whole system, but without any very evident oscillations. A cold ensues, which

occasioning reaction, makes the oscillations manifest, and thus seems to be the primary cause of the fever, whereas it only gave the impulse that brought it forwards. The stimulant causes, which are extremely numerous, are primitive or external, secondary or internal. Of the first, we may mention heat, electricity and putrid and virulent miasmata; of the second, passions of the mind, secreted humours absorbed into the blood, and blood itself in too great quantity or in a vitiated state. Our author's commentary on this subject is well worthy of perusal. The physician's attention should always in a particular manner be directed to the causes of fever.

On the symptoms of fever, our author is very full. He observes, that the pestilential virus, applied immediately and in great quantity, acts like a subtile poison, and kills instantly, in the same manner as the prussic acid would do; in a less dose it produces, after superaction, either a fatal torpor, or rapid adynamia, passive hæmorrhages, gangrene, death; in a still weaker dose, it gives rise to intermediate adynamia, and admits of several oscillations. Every virus has the same property. The violence of peculiar symptoms depends often entirely on the presence of the morbid cause; and if this can be removed early, the fever is generally much shortened. Our author's remarks on morbid oscillations, and the mode in which they constitute the periods of fevers, particularly the remittent or intermittent, are probably more ingenious than true. But no disease has set the physician's imagination so much at work as fever. Every febrile affection should be classed under one head; and the treatment should be founded on its common phenomena, but modified according to circumstances. Medicine would ill deserve the name of a science, were we to class as a distinct disease each species of pulmonary catarrh; our treatment of fever, therefore, should not be regulated by the names which authors have bestowed upon it.

In examining the bodies of those who have died of fever, we have been able to detect little. The nervous system is probably the seat of the disease, but as yet little or no attention has been paid in its appearances, nor, indeed, is it an easy matter to do so. The nerves of an animal killed by electricity must be the parts most affected by its influence, yet no change has hitherto been observed in them after death. As a specimen of the author's commentary we insert his note upon the *post mortem* appearances of the nervous system. In many severe fevers, *the brain*, he says, *is super-exalted*, and it is found after death, to be more or less injured; sometimes it is merely moistened with a viscous serosity, at other times the serosity completely covers

the surface, and fills the ventricles of the brain (Prost and Coutanceau). We have proof of it in acute hydrocephalus, and in serous apoplexy. In those patients who were carried off by the fever of the West Indies, M. Bally found the brain bathed with serosity of a reddish colour, and which was streaked with blood. In opening the bodies of patients who have died of the plague, the most remarkable appearance is the shrinking and melting, as it were, of the cortical and medullary parts of the brain (Alard). Pringle observed nearly the same thing in the hospital fever. After typhus, every part of the brain is sometimes filled or stuffed with serosity (Hildenbrand and Horn). In other cases it has been found hard and swelled (Bancroft), or softened, compressed, and considerably reduced in size, and the spinal cord has been affected in the same manner (Savaresi). The membranes also, are often injected and stuffed with blood, and consequently opake and thickened (Prost). The nerves are more rarely injured, at least apparently; yet their appearance is often a good deal changed (Cotugno); for they have been seen enlarged by the interposition of fluids in their substance, and wasted away, and softened, &c. The cellular matter which covers their filaments, is sometimes thickened, and sometimes their arteries or veins are dilated (Portal). According to Reimar, the nerves of parts affected with chronic inflammation are very large; and M. Chaussier long ago observed, that the nerves of the uterus grew much larger during pregnancy. Perhaps these changes would be more easily seen in the ganglia. After nervous and convulsive disorders, Lancisi found them much bulkier than common, and beset with hydatids.

All the above information the author has given, but in a more condensed form, in his text. He observes, that the neuarteries or capillaries are the part of the nervous system that shew the most evident marks of its exaltation; and we have an example of this when the whole texture of the brain is gorged with blood. M. Audenard, in the fever of Barcelona, observed, that the spinal cord was similarly affected. After catarrhal, low, or irregular fevers, our author has found the nervous ganglia and plexus larger and redder than ordinary. Humourous oozings of blood from the liver, lungs, spleen, &c., sometimes tinge the adjacent parts, and give the appearance of inflammation, when there has been none in reality; but all such tinges may, in general, be easily removed by a short maceration in water.

In the cure of fever, all preservative and curative means should be employed against the morbific cause. To destroy that cause, or to remove from its influence, are undoubtedly the most efficacious prophylactics; but when this cannot be done,

we must improve, strengthen, or alter the habit. Thus Europeans, when they first go to the West Indies, should keep aloof from the most violent heats, or weaken their effects by the coolness of their dwellings; and prevent superaction by cooling drinks, &c., or abate it by blood-letting; and in this way, prudent physicians escape infection during the course of epidemics; and when fatigue makes them apprehensive of subaction, they defend themselves by the moderate use of some diffusible stimulant.

Before the appearance of M. Broussais, an emetic was the remedy generally employed, especially by the moderns, in the commencement of fevers; but M. Duges suspects that its shock will always be hurtful, unless the disease be occasioned by a primitive bilious state; and here even the partisans of M. Broussais acknowledge the propriety of an emetic. A gentle laxative is always useful; and M. Duges has found such as are oily or saline particularly useful in the fevers of lying-in women. If we moderate the effects of miasmata, and oppose the violent symptoms which they produce, without *interfering with the course of nature*, the system will become accustomed to bear them, and thus the poison, whether evacuated or not, will be no longer hurtful. But when absorption of the miasmata has taken place, it is often possible to evacuate them by emetics, sudorifics, diuretics, laxatives, or blood-letting; none of these, however, particularly blood-letting, should be carried to excess.

The first period, or the forerunner of fever, is, for the most part, a slow superaction, which is in fact the establishment of exaltation; and here sedatives are the proper remedies. In the second period, the first collapsus or shivering, the symptoms have more resemblance to torpor than exhaustion. Its remedies are warm and gentle aromatic draughts, vapour baths, frictions; and these sometimes procure a favourable sweat by the time reaction comes on. Here wine, and other durable stimulants, never should be employed, as they may produce inflammation of the stomach (local super-exaltation). In the third period, *reaction*, superaction is at its height; and here the remedies are sedatives, emollients, lukewarm baths, lotions, fomentations, and cooling aqueous or mucilaginous drinks. The patient should be kept moderately cool, and be removed from every moral and physical excitement. During reaction the patient may be taken out of bed and laid on a sofa. Mild evacuations, and general and local blood-letting, are proper; but all should be used in moderation, for when exaltation is fairly established, it can be destroyed only by degrees. When a fever has arrived at this period, it *will run its course*, and all we can

do is to moderate reaction, that the subsequent subaction may be moderate. The fourth period, second collapsus, adynamia, is an embarrassing state for the physician, as frequently the mildest stimulants excite a fatal superaction, fatal by the exhaustion it redoubles. Here astringents may be of much use; stimulants are never useful, unless a kind of stupor and chilness be superadded to adynamia. This, and the second period, are subactions; but here we have an *inherency* of exaltation and a degree of exhaustion, the consequence of the third period. In some cases wine is necessary, but it should be always followed by a tonic medicine; and if there be local super-exaltation in any part, as in the parotid or inguinal glands, it should be fostered, and brought to suppuration, as an auxiliary against hyposthenia; or a mild issue may be opened in some favourable situation. Extremes of temperature, light, noise, the erect posture, and muscular exertion should be carefully avoided. Every lively emotion, every melancholy passion should be dreaded; but nothing has a more beneficial effect than the hope of recovery, or the affectionate attendance of the patient's friends. In rapid adynamia, opium should be joined with tonics. In moderate adynamia, where there are secondary and rather irregular oscillations (ataxia), camphire, serpentaria, arnica, angelica, &c., with sinapisms and blisters, are sometimes useful.

With regard to particular symptoms, in general, if excessive sensibility in the epigastrium or about the loins; if vomiting, diarrhœa and flatulent swelling of the abdomen indicate super-exaltation of the abdominal plexus and ganglia, or even of the gastro-enteric neurarteries, it will be right to employ leeches and cataplasms, &c., in the period of super-action. In well marked adynamia, the ancients applied stimulants to these parts; but if local super-action be then present, they are manifestly improper.

Our author thinks, that if his view of fever be a just one, we need no longer be surprised that opposite treatments have succeeded in the same kinds of fever; and he is of opinion that it will dissipate much of the darkness which hitherto surrounded febrile epidemics. In doubtful cases, he advises extreme caution; as it is better in such, to make a patient drink plentifully of some mild diluting medicine only, than run the risk of killing him by a powerful one.

M. Duges considers inflammation, in every instance, as a *super-exaltation* of the *neurarteries* of some particular part; so called, because these arteries are often in a state of *exaltation*, when inflammation is not present. Their general *super-exalta-*

tion would occasion death. The causes of inflammation are direct or indirect (idiopathic and sympathetic), sedative or stimulant; and they have been illustrated by our author in his own phraseology, at considerable length. All morbid poisons or miasmata, he thinks, are stimulant, though not equally so, there being the same degree of difference amongst them as between rancid fat and sulphuric acid.

He says, there are only three constant periods in inflammation; superaction directly excited, at the same time as exaltation, remission, or subaction, and the termination of the disease; but their career depends on circumstances. Chronic inflammation is only a sort of termination of the disease.

We pass over many curious remarks on causes and *post mortem* appearances, and proceed to the treatment. It is only a very slight inflammation that should be left to nature. The cause of the disease must first of all attract the physician's notice; and here the author enlarges a good deal, but not in a novel manner. When nothing contra-indicates, he observes that it is always prudent to attempt the sudden resolution of inflammation. Sedatives are employed for this purpose, and tonics or astringents. M. Duges will not allow stimulants to be discutient, and he thinks they have never proved so, but in very slight *metastatic* inflammations. Local blood-letting, in most cases, should precede the use of discutients. When it cannot be determined whether the cause is permanent or transitory, emollients may often be employed with safety and advantage; for they moderate super-action, and never, *of themselves*, produce gangrene or induration. Such remedies, almost alone, are indicated when the morbid habit has firmly laid hold of an organ; here violent narcotics might favour induration, or make the disease assume a chronic form. It is not always that we have the mode of termination in our power. In the tendency to gangrene, super-action must be moderated by emollients and *some local blood-letting*, perhaps by some very mild narcotic (coolness, and not cold); and the remission must be supported by passing gently from emollients to tonics, and mingling and associating them inwardly and outwardly.

The application of blisters and caustics to gangrenous inflammation can only produce mischief. In many instances suppuration is the only means by which we can prevent gangrene, chronicity, or induration; but in certain cases, it should be studiously avoided. In the early periods of some fevers, in emaciated patients, and where any malignant virus is in danger of being re-produced, we should moderate its quantity, or suppress it entirely. The evacuation of pus has, in general, been

too much neglected. Chronic inflammation is aggravated by emollients, and it is never useful unless nature has become accustomed to it, and the affected organ acts the part of an issue, without producing any great inconvenience or apprehension of future mischief. The removal of induration must be attempted by stimulants, but not without considerable circumspection.

We have been more full in our analysis of the text of this volume, than may be thought requisite by many of our readers; especially as it is the work of so young a man. In having so done, however, we consider ourselves as the dispensers, not of M. Duges' opinions, but of the theory and practice of a part of the French school of medicine; and on that account we trust that in so far we have done well.

In his second volume our author gives cases and observations, illustrative of the doctrines contained in his first volume. That these may not appear to be violently adapted to favour his own theory, he gives a great number of cases furnished by his friend M. Pariset, who had no theory to serve; to these he subjoins his own observations, which occupy by far the greatest part of the volume. As a specimen of French practice, we give an abstract of a case cured, and of one which proved fatal. The first is a catarrhal and ataxo-adynamic fever, cured.

Pierre Dupont, twenty-one years of age, entered the Hôtel Dieu, 19th January, 1821; left it cured, April 17th. Previous to his entering the hospital, he had a severe diarrhœa, with prostration of strength. He had had twenty-five leeches applied to his legs, and had drunk lemonade without benefit. On coming to the hospital his diarrhœa was profuse, he had frequent cough and expectoration with dyspnœa. His pulse was quick and frequent, skin warm and dry; he had intense headache, deafness, and hesitation in speaking, and felt pain in his throat. His belly was hard and tense, but not pained on pressure. He was ordered weak veal-ptisan, which was continued till the 22d. His pulse was now hard and frequent, his belly painful to the touch; the purging having now left him. Two platefuls of blood taken from his arm, and the ptisan continued.—23d, No pain; ptisan continued.—24th, Debility (subaction, adynamia), deafness, difficulty in speaking, diarrhœa, cough, pain and redness in the throat, quick pulse and starting of the tendons. Patient sensible. Ptisan continued, sinapisms to the feet; a mustard pediluvium in the evening.—25th, No better. Tongue red and dry, thirst and purging, pulse small, soft, and very frequent, skin dry and hot. Ptisan continued, a blister applied to the back of the neck.—26th, Face dull, but the patient sensible.

Teeth and tongue dry and covered with a yellow fur, difficulty in speaking, thirst, pulse quick, but easily compressible. Skin dry and hot, shootings of the tendons. Sinapisms again applied. In the evening teeth and tongue black.—27th, Tongue and teeth dry, but not black, pulse small and sunk, skin dry, thirst great; patient sensible and in no pain.—28th, Face rather hippocratic; little change otherwise. Diarrhœa lessened. A glyster with fifteen grains of camphire.—29th, Patient much better; diarrhœa abating. Starting of the tendons gone. Glyster continued.—30th, Little change; starting of the tendons returned in the evening.—31st, Features sunk. Eyes dull, teeth dry, tongue white and dry, thirst and quick pulse. Patient says he has no pain, but his breathing is high and confined. Ptisan continued, and a sinapism applied betwixt the shoulders.—February 1st, Loss of speech, dry, yellow tongue, small, irregular quick pulse, skin dry and burning, dyspnœa, some diarrhœa. Ptisan continued.—2d, Pulse rather freer, skin warm, tongue moist, and covered with a thick white fur. No pain.—5th, Face more lively (return towards equilibrium), eye quick, tongue white and moist, and its coat thinner; thirst continues, but diarrhœa nearly gone; skin warm, pulse improving; no pain.—7th, Pulse almost natural. Patient begins to turn on his side.—28th, Was doing well, and had nourishing diet; but last night, after eating too much, he was seized with fever (renewal of exaltation). Low diet. Cough, and thick white mucus expectoration. Ordered decoction of mallows and a pectoral jalap.—March 8th, Much better. Fever gone. Cough and expectoration less. Same drink continued.—13th, Cough and expectoration gone. Nourishing diet gradually allowed him till he left the hospital.

The second case is a severe catarrhal affection and adynamic fever in a child, with fatal indigestion during convalescence. Charles Levique, aged 26 months, slightly affected with rickets. For eight days past has had daily evening paroxysms of fever (gradual establishment of exaltation), with oppression, want of appetite, sleepiness, hot skin. These symptoms attributed to the coming of his back teeth. On 24th November, 1822, after paleness and uneasiness, he was seized with convulsions (spasmodic reaction, the consequence of stupor, which in children takes place of shivering). These were followed by severe continued fever. Unceasing cough. Urine scanty. Constant pain in the lower part of the belly. Great thirst. The child remained in this state for five days, and grew a good deal thinner. On the 25th. M. Pariset was called in. The child was now sullen and oppressed, at times extremely restless, crying,

or speaking incoherently, and evidencing by his gestures a state of sthenic delirium. Skin hot and dry, pulse hard, at 130 in the minute, but confined, tongue red, throat inflamed, thirst, difficulty in swallowing, and frequent cough; belly rather pained and tumid (super-exaltation of all the mucous membranes); costiveness and scanty urine. Lukewarm bath and an emulsion prescribed, with oily glysters, a poultice to the abdomen, and an infusion of violet flowers; bath was too warm, and the child would not stay in it.—26th, Pulse *hard* and frequent, but small; face pale, delirium less marked, slight stupor; glysters procured hardly any motions. A leech was applied near the caput coli, as the part appeared tender, but it did little; bath was repeated, and the child remained two hours in it, in great spirits; but immediately after (the bath had been too hot) he became silent, pale and stupid; belly tumid, he cried, and spoke incoherently all night (asthenic delirium). Depression, urine once passed involuntarily.—27th, Child pale and feeble, with dilated pupil, and convergent squinting (symptoms of effusion within the skull), tongue red, lips covered with a dark crust, little cough, chest sonorous, belly tense, skin hot and dry, pulse *small*, quick and *soft*, inarticulate wailings. Remedies: decoction of lime and rue, camomile glyster to the belly, kino, mustard and lintseed poultice to the legs, a potion with tartarised tincture of steel and spirit of pinks.—December 3d, Till now, in the same state, with alternations (secondary oscillations) of strength and weakness in the pulse, and of paleness and flushing; dark coloured stools, swelling of abdomen gone, increase of urine, emaciation greater, strengthening, and, at times, stimulant remedies applied, such as spirit of orange bark and kino, decoction of Provence roses and hysop, broth, wine, &c., a blister on the back of the neck: the pulse now is less frequent (115) and not so soft, there is less squinting, and the child asks for food; teeth seems to trouble him; the tongue is still red, and the cough pretty frequent; urine and stools are free. For some days past apparently a loss of motion in the left leg and arm, and since yesterday the legs have been bent and rather stiff; friction has been used to the limbs, a blister put behind the right ear, and an infusion of orange flowers and syrup of rhubarb administered; in the evening lettuce water and syrup of poppy: he slept in the night.—4th, More sensible, pulse less frequent (110); an error in diet occasioned the return of fever. Next day he got nothing but broth thickened with yolk of egg, and some very weak wine and water: he soon recovered health and strength, and M. Pinel gave over his attendance, but recommended a strict regimen. Soon after, however, his stomach

was loaded with soups, vegetables, and pastry: after every meal, the child soon became sullen, and heaved deep sighs. To amuse the child, they exposed him on the 21st December to a piercing cold in a public walk. The fever returned in the evening. Next morning the belly was pained and costive.—Dec. 23d, Fever and delirium, belly tumid, painful, and costive: in the evening the physician ordered oily glysters, and eight grains of calomel: hardly any stools.—24th, Retching, belly tense, hard, and painful, tongue red, face pale, pulse of moderate strength: two large leeches applied to the sides of the navel, a poultice to the abdomen, and glysters used. In the evening, the child weak and pale, the leeches having drawn a good deal of blood: five or six stools, which completely relaxed the abdomen; a little wine, with syrup of kino was prescribed, and poultices of mustard sprinkled with kino. In consequence of blood flowing in the night from one of the leech bites, the child died next morning quite exhausted.

We now enter upon M. Duges' own observations, made at the Hospital *des Enfans Malades.*

In the year 1818, the heat and drought of the summer, formed a striking contrast to the cold and damp of winter, yet there were frequently in each of them, sudden variations of cold and heat, and of dry and damp weather. The sky, though seldom rainy, was often dark and cloudy; and fogs were very common. The winds in general were not strong, but extremely variable. The medical constitution of this year was essentially inflammatory; for more than a third part of the deaths were occasioned by inflammation. There were, however, a good number of essential fevers, pure and uncomplicated. M. Duges has particularized the state of the weather, during every month of the year; but in this we think it unnecessary to follow him.

He first of all treats of ataxic and adynamic fevers, between which there are many points of analogy. None of these fevers appeared in warm, dry weather. The young girls seized with them had apparently strong constitutions; and they seldom attacked very young children. Water in the head, which is an essential brain fever, comes in place of them. Almost all the patients came from dirty damp streets, constantly filled with the putrid remains of animal and vegetable substances; and the children themselves were generally subject to some chronic disorder, as itch, scrofula, diarrhœa and consumption. The children had also for a long time been in a miserable state, exposed to cold and hunger, and fed upon the coarsest aliment. For a few days, or even weeks, previous to the invasion of the fever, the patients were sullen, sleepy, oppressed; they had no appetite,

and complained of thirst and headache. Sometimes they had frequent bleedings at the nose, and often felt pain at the epigastrium, with a bitter taste in the mouth and sickness; and sometimes the disease began like a severe pulmonary catarrh. The attack was always ushered in by repeated shiverings, with pungent heat and dryness of the skin. Chills and heat alternated in general for some days. The headache next increased considerably, and was accompanied by dizziness, torpor, slight delirium, and sometimes deafness. The patient felt much debilitated and oppressed, and as if bruised all over. The skin affected the physician's fingers with a strong pungent heat; and the pulse was full and strong, but still hard and confined. If before the attack there had been any cough or tenderness at the epigastrium, they were now both augmented.

The patients next loathed their food; the mouth became clammy; the gums and then the teeth were covered with a sticky mucus which grew black as it hardened; the lips covered with a similar incrustation were often scaly, cracked, and bleeding; the tongue (particularly in ataxic fevers) had seldom this appearance so soon; but towards the end of the disease, its papillæ became brown, hard, and dry; thirst, for the most part, was unceasing; swallowing was difficult only in ataxic fevers; there was now no sickness, but if at first the abdomen felt tender, it still continued so; the bowels were generally bound in the beginning of the disease, and too open towards its termination. The pulse in a few days sunk all at once, and became small and weak, especially if blood-letting had been carried too far. There was frequent bleeding at the nose, but it never lasted long, and there was no difficulty in stopping it. During the whole course of the disease there was a constant *tendency to shivering*, particularly in the lower extremities if they remained a moment uncovered. There were frequent alternations of heat and cold, the complexion then varying from red to pale; and the pulse corresponded with these changes. In fatal cases, two or three days before death, the breathing became loud and laborious, but without cough or expectoration, and *without any febrile excitement*. Sweat of any kind was extremely rare; but, a few days before death, a cadaverous moisture covered the face, and some other parts of the body. Little attention was paid to the urine; but, near the close of the disease, it was passed involuntarily, or retained in the bladder. In the countenance there was an expression of exhaustion and stupor; the pupils in general were unequally dilated in ataxic fevers; in short there were many other symptoms of coma. Even before death there was an extreme shrinking of parts. Blindness at any period of

the fever was a fatal symptom. There was a constant dizziness only in one case (of adynamic fever). In the adynamic fever, the delirium was slight and transitory; but in the ataxic, it was constant, and often so violent, as to render it necessary to secure the patients, but it was succeeded by coma towards the close of the disease. The voice in general was weak and plaintive, and the patient often stopt short in the middle of an answer. In the ataxic fever, patients could lie on their back, or turn from side to side at pleasure; but in the adynamic, they lay constantly in the supine posture. Our author observed convulsions only in two cases. Almost all these fevers were of the continued form; but some of them assumed the remittent type, each paroxysm being preceded by a good deal of shivering. The whole course of the ataxic fevers was irregular. Their duration was from one to five weeks. The order of deaths was not altogether favourable to the doctrine of critical days.

The disease was complicated sometimes with irritation of the mucous membrane of the bronchia, the throat, and intestines; and once near the end of an adynamic fever, laryngitis occurred which resisted the application of leeches and blisters. Peripneumonia preceded a case of adynamic fever; and another was complicated with real melæne, or profuse black stools, mixed with coagulated blood.

In the earlier part of the fever, it was impossible to form an exact prognosis. Great inability of the nervous system appeared to be rather a favourable circumstance than otherwise. Convalescence was tedious; death, in general, extremely sudden.

On dissection, the capillaries of the brain were found, in general, to contain a greater quantity of blood than usual; and the ventricles rather more water. The heart always contained coagulated blood; and its texture was soft, weak, and yellowish. The lower part of the lungs were partially *indurated*, occasioned probably by congestion rather than inflammation. However, the parts were nearly as hard and firm as a piece of liver; they were generally of a violet colour, brown, or yellowish; their texture for the most part was serous and moist, but sometimes dry and elastic, and when put in water they sunk to the bottom. On the intestines there were slight marks of inflammation, and in one case ulcerations, with a bright red circumference. Here, also, the lymphatic glands were swollen and *tuberculous*, which would indicate that the complaint was not *altogether* recent. But even in cases where the abdomen had been pained and tumid, there often was no appearance of inflammation. The stomach appeared to be little changed.

The remedies employed were emetics, bark, camphire, wine,

blisters, sinapisms, glysters, emollients, leeches, and blood-letting at the arm. Where there was nausea, a bitter taste in the mouth, and a jaundiced colour of the skin, emetics were always useful; and the employment of antimonial tartar seemed to be quite as safe as ipecacuanha. Bark, whether given by the mouth, in glysters, or rubbed in the form of tincture on the skin, seldom did any good, except in the remittent type, or near the close of the complaint. But so far from irritating the bowels, it occasionally suppressed diarrhœa; but it was never given when there was much tenderness in the epigastrium. Camphire seemed to be of little use; wine, when it was given early in the disease, always did harm; blisters applied to the legs, instead of lessening, seemed constantly to increase delirium and fever; but when placed on the back of the neck, they produced a momentary advantage in coma; sinapisms were of more service than blisters, but their effect was also transitory. Emollient, or purgative glysters sometimes lessened headache, or even coma; but they brought no relief to delirium or abdominal pain. Little can be said with certainty of the effects of gummy, mucilaginous, or acidulated drinks. In the early periods, leeches applied to the neck, to the temples, and behind the ears, lessened sleepiness and headache, but in delirium they were hardly of any use. The same thing may be said nearly of their application to the anus and the surface of the abdomen; they were of little benefit to the adjacent parts. *A single blood-letting at the arm,* in cases where there was hardness of the abdomen, with coma, a full pulse, general heat, &c., *sometimes did good; a second never; and the third produced such a degree of weakness that the patient never recovered from it.* Blood-letting, indeed, employed improperly in the commencement of fevers, does much mischief by counteracting the efforts of nature, and destroying the real type of the disease.

We next have our author's remarks on water in the head, the hydrocephalic fever of Macbride, or the ataxic of Capuron. Spring and Autumn seemed to be least formidable to the disease. M. Duges inclines to the opinion that any thing which violently affects the nervous system may be an occasional cause of the hydrocephalus acutus, and more particularly jealousy and terror. The symptoms of attack could be always noticed, but they varied in their duration, from one to ten days. In the first period, he observed neither well-marked shivering nor sweats, the skin being merely hot and dry, the pulse frequent, quick and hard.

A fit or two of convulsions often marked the commencement of the second period; but sometimes the transition was made

insensibly, and its principal mark was the ceasing of palpitation and vomiting. The skin was now covered occasionally with a gentle moisture, at which time the febrile symptoms were commonly aggravated, but there was no regular type. Costiveness increased with, sometimes, flatulence, tumour and tenderness of the abdomen, headache and stupor augmented; the patients recovering from the latter, only for a short time, to complain of pain in the head, and particularly in the brow. They generally lay motionless on their backs; in a few cases they moaned, and tossed themselves about continually, and sometimes, though rarely, the arms became stiff and contracted; the pupils were often unequally dilated; and the iris was sometimes, though seldom, affected by a vibratory motion. The patients could still be so roused from their stupor as to be able to name the objects that were presented to them.

During the passage from the second to the third period, there was sometimes a dreadful remission of symptoms for three or four days, which was very apt to deceive those who had seldom met with the complaint. In this period, the pulse sometimes rose to 150 in the minute, and gradually became weaker. Costiveness was now often followed by diarrhœa. The stools were slimy, fœtid, and mixed sometimes with *lumbrici*. They were passed involuntarily, and never failed to give great relief. Deglutition became very difficult, and dyspnœa came on in fits, being more especially troublesome in the night. The skin was now covered with a cold clammy sweat, a miliary eruption of a crystalline appearance was seen upon the limbs and the abdomen, and the flushing of the face was succeeded by an excessive paleness. In two or three cases, death was preceded by convulsions.

In the seventeen cases attended by M. Duges, the disease lasted from four to fifteen days. He divides it into two varieties, the acute or superacute, in which the disease always ended before the seventh or eighth day, or the subacute which ran a somewhat longer course. It is the latter only in which it is worth while to make use of mercury. Of his seventeen cases, seven were acute and ten subacute; and they all died. Our author, however, in his private practice, cured a child eight years old, who had most of the preparatory symptoms of acute hydrocephalus. Eight leeches were applied instantly to the neck and temples, and three blisters behind the ear. Glysters were also given, and the feet were put in warm water. By this treatment the threatening symptoms were speedily removed.

In our author's remarks on the diagnosis, the complications, and prognosis, of the disease there is nothing new. He seems

to doubt whether real hydrocephalus was ever cured. On dissection, the vessels of the dura mater were full of blood; in the first, fluid; in the second, both fluid and coagulated. Those of the brain itself were small but turgid. The dura mater itself was sometimes of a greyish colour and thickened, but oftenest thin, red, and semi-transparent. The arachnoid coat was in two different states. It is either moist, and raised up by a great quantity of limpid or bloody serum, infiltrated in the interstices of the pia mater, in which case the whole brain is imbued with serum, as is also the spinal cord; or it is dry, glued to the dura mater and a little opake, and then we observe in the deepest convolutions, near the fossa sylvii and the base of the fourth ventricle, an albuminous,greenish, half concrete matter, infiltrated into the texture of the pia mater, and covered by an additional portion of the arachnoid membrane somewhat thickened. In some cases there was a flattening and an enlargement of the posterior and superior convolutions of the brain; and its substance was pretty firm, except in those instances where every part of it had been bedewed with serum. In the ventricles there was no trace of inflammation; nor could any change be detected in the internal arachnoid; but there was generally an effusion of serum, particularly in the three anterior ventricles. The quantity of fluid varied from two to three ounces to a few drops. The lungs very often contained miliary tubercles or granulations. Worms of different species were found in the intestines; and in one case the latter exhibited marks of enteritis.

With respect to the cure of hydrocephalus, external remedies appeared to have most efficacy. From six to twelve leeches, applied repeatedly to the neck and temples, seemed to have a salutary effect in the first period; but towards the close, when the pulse had become intermittent, blood-letting was not only useless, but dangerous. Sinapisms rather did harm than good; blisters to the legs, thighs, and arms, were of no use; and no advantage was obtained from the application of a blister, or tartar emetic ointment, to the skin of the cranium. Mercurial ointment was always employed too late to have any efficacy. A blister applied to the back of the neck, in the height of the disorder, gave only for a short time some promise of amendment; nor did any good follow the application of a seton to the same place. The good effects of irritating and purgative glysters were but momentary. Poultices, plain or sprinkled with laudanum, when applied to the head, produced little or no benefit; and ice or snow placed on the head, or very cold water poured upon it, were, to say the best of them, but precarious and inconvenient remedies. Of internal medicines, emetics, so far from

doing good, seemed rather to increase stupor; and antispasmodics appeared to moderate convulsions, but to do nothing more. Calomel, in the dose of from four to twelve grains a day, procured some temporary relief, by acting as a laxative and a vermifuge. In short, leeches and calomel given in the first stage, and arnica, camphire, and a blister to the back of the neck, were the only means likely to be efficacious; though in the hospital they did not cure a single case.

This disease, in M. Duges' opinion, is an exaltation of the whole nervous system; affecting the brain, however, more deeply and violently than any other part of it. Its phenomena are strictly febrile, but are not those of inflammation. In the first period, he recommends the antiphlogistic regimen to be moderately but constantly employed, so as to prevent any violent reaction; and in the last, to avoid sedatives, or rather to use tonics.

Measles are the disease next mentioned. They seemed to attack children who were recovering from acute or chronic inflammation of the thoracic viscera, in preference to others. In some patients (the parents said) the disease had occurred twice. Besides fever, a painful affection of the throat was one of the principal symptoms that preceded the eruption. With the eruption, the cough, pain in the throat, and redness of the eyes were evidently increased; and at the same time the heat and dryness of the skin and the fever became more intense; but headache seemed to be considerably abated. In some cases, the eruptions were of very short duration, not more than a single day; and these were as legitimate as others, where it lasted seven days. Our author goes at length into the diagnosis of the disease, discriminating its varieties, and distinguishing it from the miliary eruption, urticaria, and small-pox. Its complications were all inflammatory; pulmonary catarrh, ophthalmia, cynanche, pneumonia, aphthæ, &c. The ophthalmia usually attacked one eye, and the cases terminated fatally. Pneumonia appeared *constantly* when tonics and sudorifics were administered with the view of favouring the eruption, and *determining to the skin*. In distinguishing this complication, percussion of the thorax was of essential service.

When the disease was uncomplicated, no variety of it was fatal. Its most dangerous complications were pneumonia and cynanche laryngæa. When a crystalline miliary eruption made its appearance, it prognosticated death; and we have reason to think that it does so in most infantile disorders. Of seventy-four patients, twenty-nine died.

On dissection, the mucous membranes of the pharynx, larynx,

bronchia, and even of some parts of the small intestines, were of a red colour ; and in most parts of the intestines a black speck was constantly found in the centre of the *mucous follicles*. The lungs exhibited various traces of inflammation ; some of them so remarkable, that they might have been taken for an internal eruption. After pneumonia, it was generally the inferior and back part of the lungs which was affected ; their whole substance was seldom diseased, except in some chronic cases, and in these the inside of the cæcum and ilium was pretty often ulcerated.

In the treatment of measles, the warm bath and fumigations, used to prevent the disappearing of the eruption, *never* answered the desired end ; and when there was no disorder in the bowels, nor obstinate costiveness, emetics and purgatives were useless. Blood-letting was never proper, except when there was evident plethora, or inflammatory complication. When an emetic was necessary, ipecacuan was always used. Headache was relieved by leeches ; and these were most serviceable when applied to the temples, or behind the ears. The application of leeches also to the sternum, or under the breasts, did great good in violent pulmonary catarrh. In elderly children a small blood-letting was useful ; but in coughs that were extremely harassing, and apparently nervous, the syrup of opium was never serviceable. Blisters to the sternum, in chronic pulmonary catarrh, never seemed to do much good. In chronic ophthalmia, blisters to the back of the neck and behind the ears, often had a wonderfully good effect. In pneumonia blood-letting at the arm was necessary; but in very young children, leeches were used in place of it. If two blood-lettings were attended with an advantage, a third was hurtful. When the pneumonia became chronic, small blood-lettings, at long intervals, were serviceable where blisters had a very powerful effect. The disease of measles, according to M. Duges, is strictly febrile, and the eruption is merely an effect of fever; and should it disappear, there is no reason to fear, as some physicians have done, a metastasis. Sudorifics and stimulants indeed, given with the view of sending out the eruption, have been productive of the worst consequences. Its disappearance depends on adynamia, or debility, for the most part, and it is this we have to combat.

Our author's observations on small-pox extend to a great length, for he regards it as the prototype of all other febrile affections, which originate from a particular virus or corrupt effluvium. As the ground-work of his observations, we have an account of the small-pox of 1817, and more particularly of 1818, and he is clearly of opinion, that particular states of the

atmosphere dispose to the disease. But the situation and circumstances of the patient seem to have little effect in its production, as from a suburb of Paris, inhabited by poor people, the hospital received only one patient. Of its contagious nature there can be no doubt. To follow our author, however, in his description of small-pox, though he has given it with great accuracy, would be a needless labour; we shall, therefore, only make a few cursory remarks.

Suppression of urine preceded one case of malignant small-pox; which proved fatal four days after the eruption. Vomiting, sickness, and sinking alternating with them, were sometimes excessive previous to the eruption, and of themselves required all the attention of the physician. Cerebral symptoms were also in some cases so violent, that their real nature was not understood, till the appearance of the pustules. Of this kind, we may mention profound coma, delirium, agitation, convulsive movements, with an irregular pulse and pulsations in the vessels of the neck, violent headache, dilated pupils, &c. During the suppuration of the pustules, enormous swelling of the face and salivation were almost always fatal. At this time, diarrhœa was also a very distressing symptom, and often removed long after the primary disease. When there was an eruption of vesicles, like pemphigus, the patients died with all the symptoms of ataxia or malignant fever. Ophthalmia, likewise, produced death in some instances; and here the cornea was quite destroyed, and the vitreous humour resembled a clot of blood. Sometimes, after the scabs had fallen off, ulcers made their appearance like hospital gangrene; and two or three children died in consequence of enormous intermuscular abscesses.

M. Duges has given a very full account of *post mortem* appearances; but to do it justice we ought to transcribe the whole of it, but this, we grieve to say, our limits will not admit of. We might say the same thing of the treatment; but with regard to it we shall make one or two remarks. In 1818 some circumstances occurred in the wards, which were thought to give proof of the inefficacy of vaccination. Indeed, it is not to be depended upon till after suppuration; and cases of small-pox which occur before this period should not militate against it. But there is little novelty in what our author writes on this subject. He too, thinks that chicken-pox is but a mild small-pox.

In the cure of small-pox, it is the primary fever which should claim all our attention, whatever be the form or progress of the eruption. Our author now passes in review the various remedies employed in the first period; and those he speaks of most highly are purgatives and glysters; narcotics he unequivocally con-

demns, and wonders how Sydenham should have bestowed so many praises on laudanum. But to enlarge on this subject would be a mere repetition of what is already known. M. Duges thinks that the cases of small-pox which have occurred after vaccination, ought in no way to weaken the happy chances procured by it, or lessen the merit of such an inestimable discovery. Would that some of our men of eminence could see the matter in so favourable a light!

To cynanche laryngæa and trachealis, the youngest and stoutest children appeared the most liable; and in them it generally made rapid progress, and terminated fatally in a short time. In the advanced state of cynanche laryngæa, deglutition became extremely difficult, exciting both cough and anxiety. In some patients very violent struggles, in others profound coma, preceded death. When recovery took place, the disease, after reaching a moderate height, gradually abated, the patient expectorating in great quantity an opake matter intermixed with white flakes, or what bore the appearance of shreds of membrane. Its duration seldom exceeded four or five days; and in one case, though the most active remedies were employed, it terminated fatally in twelve hours. Chronic cases were equally fatal; some patients lingering for five or six months. Sometimes the disease was not attended by its characteristic symptoms; its real nature not being detected till after death. Hardly any child recovered from it who was under six years of age.

In the curative treatment, our author found the application of leeches to the throat sometimes useful; but even in that case, a repetition of it seldom did good. Fumigations were hurtful or useless. Blisters, sinapisms, and purgative glysters, brought relief in a few cases, but in many others, they had no efficacy. It was only at the commencement of the inflammation that emetics were admissible; and even then, as M. Duges thinks, only when the patient was bilious, or his stomach loaded. He wonders that the lukewarm bath has not been more generally employed.

Infantile diarrhœas, in this work, are divided into four kinds, simple-passive, catarrhal, ulcerous, and compound; but the remarks on this subject exhibit little novelty. The notices of dissections, however, are valuable.

In the year 1818, ten cases of carbuncle (charbon) occurred in the hospital. This is described as an almost indolent swelling, which terminated for the most part in gangrene and death. It attacked three different parts of the body, the face, the anus, and the genitals; but principally the first. The swelling spread quickly to the adjacent parts; and from the fifth to the tenth

day, an irregular spot made its appearance in the centre of the tumour, the certain forerunner of fatal gangrene. Nothing satisfactorily can be said about its cure, as it seemed to resist every remedy. M. Jadelot cured one case by the early application of leeches. Though it resembled hospital gangrene, neither the actual cautery, caustics, nor scarifications were employed, as the physicians of the hospital had become disgusted with such practice, from its having so often produced pernicious consequences. Here tonics have been used too early, and bloodletting too late.

We have next some observations on the dysmenorrhœa of very young girls. In many cases of this kind, the application of leeches to the groin or pubes will remove all the disagreeable symptoms for a time. Dysmenorrhœa may be confounded with abdominal obstructions, enteritis or peritonitis, worms, diseases of the heart or pericardium, and organic or inflammatory diseases of the bladder. M. Duges having been accused by the Parisian faculty of medicine, of confounding the symptoms of dysmenorrhœa and hysteria, has here justified himself at considerable length, and made many remarks on *hysteria plethorica*, and *hysteria nervosa*, as connected with difficult menstruation; but we give none of his arguments, as most of them may be found in Gregory's Conspectus, stated with all that strength and felicity of language, for which its distinguished author was so generally celebrated. It would be injustice, however, to our author not to say, that he has treated the subject learnedly and ably; and that his notes *de coitus utilitate in dysmenorrhœa* are extremely curious.

In M. Duges' opinion, hypochondriasis depends on a torpid state of the stomach, or even of the liver, or of the abdominal nerves; the brain never being affected but by sympathy. Hemicrania or megrim, on the other hand, is an affection of the encyphalon, and more particularly of the cerebellum, as our author thinks, and which sympathetically only disturbs the functions of the stomach, &c. Hyposthenia in his opinion, is a characteristic of both affections; consequently these remedies are either stimulant or tonic. He has found bathing the feet in very hot water sharpened with mustard, of excellent service in megrim; and he knew two young persons who felt great relief in this complaint, from surrounding the body, especially the head, with a warm atmosphere. In both affections, however, he recommends an issue to be established near the head.

On chorea, which with M. Duges is also hyposthenic, and on indigestions, we find little or nothing worthy of being transcribed.

We have thus given a fair analysis of this bulky composition, but we have done so in a very general manner, for our author being one of the most methodical of writers, had we followed him in all his divisions and subdivisions, it would have been much longer than it is, and after all our article is little better than an empty plan, or a mere table of contents. We believe his cases are fairly enough stated, but, in every one of them, we see, or fancy we see, his anxiety to accommodate them to his peculiar theory, a theory which descends too much into minutiæ and is too perplexing, we conceive, ever to become general among practitioners. Its grand features, however, have been long acted upon in practice. Our author is quite a Frenchman: he speaks well enough of the older English medical writers, but of even the most eminent of the present day, he says not one word; whilst he praises incessantly his French contemporaries. He writes in a good style; but we suspect that the medical writings of most Frenchmen are revised previous to publication, by some literary character, which will account for their style being in general superior to that of English ones.

On the Cause of the Formation of Worms in the Human Intestines. From the German of BREMSER, by H. S. HYMANS, M.D. A.C.M. of Rotterdam.

[Communicated by Dr. W. Philip, through Dr. Johnson].

If it be proved that worms do not come from without into the human body, nor are innate with it, and consequently must owe their existence to some preternatural formation, the cause of this formation cannot probably be found in any thing else than in some anomalous quality, or mixture of certain substances, nourishing, either generally or partially, some of the single organs of the body, or in a superfluity of those substances; to which cause, with the same justice as to any other, the said vermi-formation may very well be ascribed. The cause, however, of such an anomalous quality, or disproportion in the nutritive substances, can only be found in a relative debility of some organs, and not in a general one. For, as little as any debility may be called a disease, while the harmony of all animal functions is prevailing; just as little, the said debility may be termed a cause of the formation of worms. It is only from

a derangement of the functions of some separate organ, that a disease can be formed. The same, then, must take place, whenever any formation of worms shall be effected. If, for instance, in the stomach, the nourishing substances prepared from the food, are congruent with the nutritive secretions; if no more substances be animalized there than the absorbent vessels of the intestinal tube are able to take up, and actually have absorbed; or, on the contrary, if the fluids separated from the animal body itself, agree with the quantity of substances taken up by it, in order to be animalized and become homogenious with its own mass;—in many of these cases, no vermi-formation will ever occur. But if the contrary takes place, nothing is sooner effected than the aforesaid formation. This, likewise, may account for our often meeting with persons who, if judged from their outward appearance, seem to be quite well, while, notwithstanding this, they are harbouring worms in their intestines. The stomach and bowels, or what are called first passages, in that case seem to be in a condition of higher vitality, than required for the preservation of the organism, and therefore, the action of the absorbent vessels, (which merely take up the quantity required to supply the necessarily evacuated secretions, and nothing more,) is not congruent with the former condition; and in this case, the quantity of matter animalized by the digestive organs surpasses that which is absorbed by them; and thus, the remaining animal substance is appointed to form a living matter, or a worm. By this we see, that in a human body, the opportunity to form worms in the intestines, as well as that to other diseases, may, either be hereditary, innate, or acquired. Nay, this gives a satisfactory explanation, why children more than adults—women, more than men, are disposed to the vermi-formation. In both, a certain debility of the absorbent vessels is constantly prevailing. It is a well known fact, that during the first months of life, children, especially those that are not suckled often, do not prosper; or at least, increase but very little in growth and strength, in spite of the abundance of good nourishing food bestowed on them. Now this is by no means to be always imputed to a want of nutrition in the food taken by them, but merely to the bad preparation of it in the stomach, and to the want of sufficient absorbance of the chyle prepared from it.—In scrofulous or atrophic children, the free passage through the absorbent nourishing vessels is stopped, or, at least, considerably impeded; thus a great quantity of chyle remains stagnant in the intestines, in which I not only reckon the substances absorbed from the nutriments taken, but also the mixture of the substances

absorbed from them; and moreover, the mixture of these substances with the fluids of the body; in a word, a fluid already animalized, if not evacuated by stool, in the same manner as the usual secretions, easily proceeds to a formation of worms. Children of this description, as it is evident by appearance, are commonly affected with worms.

This explanation of the vermi-formation, according to my opinion, comes much nearer to reality than the doctrines of Ætius, Ægineta, Riolans, and Cabulinus; who suppose the tapeworm to be nothing else than the loosened inner skin of the tenuiora, gone over to an enlivened body. Similar theories are still to be met with in the present age. If, however, under the aforesaid conditions, worms are formed, this does not at all imply that wherever these conditions exist, worms must be found. This assertion, likewise, would be contrary to all experience; for it is frequently remarked, that all of the above mentioned circumstances take place; nay, very often all the phenomena, by which we may think ourselves fully entitled to conclude the existence of worms, present themselves to our observation, where no worms may be existing. The cause of this occurrence is easily found, being undoubtedly no other than this; that the said condition only forms the one factor or the progenitor of worms, and indeed, the only one, that lies under the reach of our contemplation. This we may call the substantial factor; the other, which I beg leave for a while to call the spiritual one, is situated far beyond the region of our investigations. Its co-operation however, is unavoidably required, whenever, out of the shapeless animalized matter, a new animal,—a worm shall be formed. To aspire to a more peculiar knowledge of this second factor,—although it be no other than the all-vivifying spirit, reigning throughout the universe, and therefore, even already present in the shapeless animalized matter, though not with the required tension to create original individual life;—will always in our present state of existence, remain a foolish attempt. It is only by its effects, that we are led to ascertain its presence.

Among the more remote causes of the vermi-formation, we may, in the first place, chiefly reckon a sedentary, inactive way of life, or any other which requires little or no exertion of muscular strength; secondly, wet, damp habitations; victuals out of which a tough, slimy, or rich chyle is prepared in the stomach; and especially the frequent use of fat, mealy, and milky food.—Feuillee considers the abundant use of sugar to be the cause of the more frequent formation of worms among the Indians. A sedentary way of life, most probably, is one of the remote causes

why the formation of worms is more frequently found in women than in men. Another still greater disposition to this formation, proceeds from a constant abode in a damp habitation, which by the suppression of free perspiration, is prejudicially operating on the functions of the absorbent vessels in the bowels. If, then, finally, the food is of such a quality as to forward the formation of worms, the means for this formation, at least on the side of the substantial factor, are completely afforded. It is a fact, that among sheep, the formation of liver worms is caused chiefly by the pasturing of these animals on marshy grounds; and hence, in well managed sheep-folds, shepherds are brought before a court of justice, whenever this, or a like disease creeps into a flock; since in such cases, either their having been pastured on wet grounds, or their having, during the winter, been fed upon muddy, not well cleansed fodder, almost to a certainty may be concluded upon. During wet seasons, however, the said complaint, without any fault of the shepherd, causes great ravages among the sheep, and it is only by a prompt administration of better food and corroborative remedies, gentian, acorns, &c., that its further progress may be in some measure restrained.

Similar worm diseases are epizootic among beasts, for besides the liver worm, another worm, called the pallisade worm (*Strongulus Felona, R.*), having its seat in the *trachea* and its branches, not seldom produces a disease among the sheep, that causes great ravages; this fact being brought to my knowledge by a great many farmers, who wrote to me on the subject.—So worm diseases, in the same manner, can be epidemic among men; for if, for instance, a certain state of our atmosphere can contribute to, or even cause a more frequent occurrence of, the bilious fever, or some other not contagious illness, so also there can be raised symptoms of worm diseases at certain fixed epochs, and in some particular countries, which and when, such remote causes of the vermi-formation are generally operating, as are looked upon to be epidemic and endemic. Under certain restrictions, then, worm epidemics are not to be considered as mere chimerical suppositions. A very remarkable one has been observed by Marie, in Ravenna and its environs, where all the diseased evacuated worms, not only by the natural secretions, but also by vomiting. Notwithstanding this, we must take care not to consider as an epidemical worm disease whatever may have been termed such. Thus, for instance, it is not at all clear to me, that worms should have produced an epidemic putrid fever, as Bernard seems to believe; but I rather think it probable that worm diseases on the

same spot are endemic. But beyond all doubt, it is absolutely false, when Ronnevault meaning a common putrid fever, terms it an epidemic putrid fever, merely on account of some of the diseased persons evacuating worms. In the Journal de Medicine, among the remarks on the description of a putrid worm fever, published by Dufour, it has, for this reason, been remarked, that the term "worm fever" should not be made use of, but the aforesaid disease should rather be called "a fever complicated with worms." Worm epidemics, then, will only take place where the formation of worms in the intestines belongs to the endemic constitution. Nevertheless it is also taught by experience, that there are some provinces, nay, whole countries, where worm diseases are far more frequent than in other regions. Daquin, though he confesses his inability to explain the cause of this occurrence, states that worms are no where met with more abundantly than in Savoy, near Chambery, where not only among the lower class of people, but also among the higher ranks of society—where a want of wholesome food, and other such like reasons, cannot be supposed—worm diseases are very frequent.

Holland and Switzerland, besides a great many parts of other countries, are chiefly looked upon as being those where worm diseases are more frequent. As to the inhabitants of the latter, it will hardly be possible to explain the cause of the more frequent formation of worms among them. Scarcely can this cause be sought in the state of the atmosphere, which, in this mountainous country, is of quite an opposite nature to the level Netherlands. With no more justice can it be supposed to reside in the quality of the food, since, at least in the somewhat larger towns, the way of life in this respect is of no material difference with that of the neighbouring countries. Perhaps milk and cheese are the only victuals to be charged with it in this instance; the former indeed, not so much on account of its being more frequently taken, but chiefly on account of its richness in nutritive substances, it being given on the spot, unmixed with water, or unadulterated; that is to say, in its natural condition. On purpose I said "perhaps," since I give this assertion merely as a fugitive supposition of mine, which most willingly I shall retract as soon as this, among the Switzers more frequent occurrence of worm diseases, and especially of the tapeworm, which their neighbours are almost entirely ignorant of, will be explained to me in a more satisfactory manner.

Among the Germans, the greater part of the French, the Italians, and even among the inhabitants of Tyrol, no other than ringworms are found, whereas a true Switzer, born from a Swiss

mother, never yet has suffered by the ringworm. Among the Russians and Poles, the tape-worm likewise is met with, whilst Rudolphi, according to his assertion, has never received any other but the ringworm out of Sweden. There the cause could very well lie in a certain peculiar disposition of the human race, from which each of the aforesaid nations descend, and whose primitive ancestors, with regard to the Russians and Swedes, are different. But from whence have the Switzers got the same worms as are found among the Russians? This has been till now an enigma, and certainly will remain so for a long lapse of time yet to come.

Among the Belgians, the quality of the atmosphere, or of the clime, which is already exerting so great an influence upon the temper of the nation, may very well be one of the common causes of the vermi-formation. But it is quite a mistaken notion to suppose, that the more frequent feeding upon fish should be anywise contributive to this formation. According to Rudolphi, there are besides the Dutch, many other coasters, who, not less than them, make use of fish-meals, and who, for all that, do not suffer more than they by worm diseases. The late Professor Reinlien, having been, during ten years, a physician to the Carthusian Friars, who make use neither of meat nor milk in their diet, but chiefly feed upon fish, asserts that he never found one of them who suffered by the tapeworm, nor could one of the oldest among them recollect ever to have seen one of his fellow-monks affected by this disease.

Nevertheless the quality of the food may, sure enough, be greatly contributive to the formation of worms, of which instance, Reinlien communicates two very remarkable occurrences. "Two years ago," he thus relates, "I treated a bachelor of about sixty years of age, who had the appearance of a very healthy bodily constitution, kept a very orderly diet, and had enjoyed throughout his lifetime an uninterrupted state of health. It was almost seven months since some well meaning friend of his had advised him, on account of his now advancing age, to alter his diet, and assured him, that henceforth he should do better to feed upon a milk diet. The poor man implicitly followed this advice, and bore this change without any harm during the course of some weeks. By degrees, however, he felt, especially after dinner, a tension in the belly, a pain in the region of the heart, a palpitation, and a decrease of appetite; his former good look vanished away, and he became subject to frequent complaints. Upon examination, I found the weak side of the bowels, together with the belly, in tension; and having been informed of the aforesaid symptoms, and of the

change that had taken place in his diet, I was induced to suppose a gastric disease, and immediately ordered a purgative, consisting of six ounces of laxative infusion, with six drachms of sal de seignette.

"I saw him the next day. His servant, who attended him for the last thirty-two years, stood anxiously in expectation of my visit, and on my arrival, showed me in the close stool of his master, together with a great deal of other excrements, a multitude of those small stones, commonly called gourd kernels*, which he took for melon currants. Upon my inquiries whether he had ever before observed any such thing in his master's stool, he replied, that for a great number of years he never had perceived any thing of the kind; but that, about three weeks ago, he had, for the first time, every now and then, begun to perceive some traces of the same phenomenon, which, however, he had thought to proceed from some other cause than his master's illness. Upon this, I directed my treatment against the tape-worm, and was so happy as to drive it off completely on the seventh day after the aforesaid occurrence. My patient now returned to his former diet, and until this very hour enjoys good health. Now, I ask," continues M. Reinlien, "how it can enter into the mind of any man of sense, to suppose the germ of this worm to have been, during sixty years and upwards, concealed within the body of this person, and not before now to have been developed?"

Another observation, not less interesting, is of the following purport: "For thirty years and more, I have known a lady, still a well looking, healthy woman, who has given birth to a dozen of vigorous children, six boys and six girls. Whenever this lady was pregnant of a girl, she was constantly drawn away by an irresistible appetite to rich, milky, and mealy food; at the same time she was afflicted with the usual accidents of worm diseases; nay, until her lying-in, she was sometimes found to have evacuated several maw-worms. Whenever she was pregnant with a boy, none of these incidents ever happened; on the contrary, she felt in this case an invincible dislike to these nutriments. At last, a six times repeated lying-in had taught her at every following confinement, with amazing exactness, to foretel the sex of the infant."

But, how evidently soever these two related instances seem to prove that the abundant use of milky and mealy food is an inducing cause to the formation of worms, yet we can never look upon this otherwise than as its being only the one factor,

* Kürbiskairna.

or rather the half of the one factor, namely, of the substantial one, and still the individual bodily constitution remains an object of peculiar interest; for it is only when this is likewise calculated for the formation of worms, that such a formation actually can take place. The dish of pease or lentils, which appeases the stomach of the day labourer, certainly will not be more flatulent than the pease or lentil soup of which the hypochondriac scarcely takes a mouthful. Nevertheless the first does not feel from this the least oppression; his bowels remain unhurt, whilst the latter is tormented in such a manner by some cubic inches of air that cannot easily find their issue, as if he were to be delivered of the antichrist. In the very same manner the nutriments, with regard to the formation of worms, operate very differently in the different bodily constitutions. In Tyrol, the country people make use of flesh meats in their meals, only four or five times a year, and yet, for aught I know, they are not very particularly afflicted with worm diseases. The nourishment of the convicts in the house of correction in this place (Vienna) consists merely of leguminous and mealy food, and with this they are compelled to labour, and even very hard; which they also often do in the open air, the good quality of which is particularly taken care of. Counsellor Guldener, administered to this house, in the quality of physician, during the space of fourteen years, and assured me, that among those prisoners, worm diseases but very seldom occurred. Milk, and its products, butter and cheese, as we have already observed, then, would perhaps be the only nutriment, which, much more than any other food, could be looked upon as favouring the formation of worms. Moreover, of all sorts of vegetable and animal substances, milk seems to be the richest in nutritive essence. The frequent and early formation of the cheese-mites, already strongly speaks in favour of this supposition, though I only communicate it as such, and by no means intend to give it as a fact.

One instance, however, I am fully convinced of. It is this, that a meagre diet, or such a one as produces but little nutrition, is not at all favourable to the formation of worms, especially of ascarides, and that worms never know a greater foe to them than the starving stomach of the body that harbours them. Upwards of two hundred carp (*Cyprinus carpio, L.*), and almost five hundred tench *(Cyprin. Tinca. L.)*, have been submitted to our examination. Only half a dozen of the latter were found to contain worms. It is true, some carps also were found with worms, but they were only such as are caught fresh in an adjacent lake, and brought to market here under

the name of sea carps. Of all the Danube carps, there was not a single one with worms. The tenches and carps, however, which the city of Vienna is usually supplied with, are generally caught in ponds, from thence brought to this place, and during a pretty long time kept in caufs on the Danube, in order to free them from a certain muddy taste, which they get in the ponds. During this watering or freshing, they are starving, and very often there is not the least track to be found in their entrails of that slimy substance, commonly observed in other fishes of their species. It may be said, that their entrails have been washed out, whereas, those of other fishes newly caught in the Danube, for instance those of the barbels *(Cyprin. Barbus L.)* are thickly cast over with slime, but also are often entirely crammed up with worms. A few years ago, some gold fishes were caught in a free fish pond, near Schönbrunn, and put into a glass with clear water. Most of them died some days afterwards. In one of them, a worm had not only worked itself through the intestines, but also through the muscles and the skin of the fish; meeting with no nourishment in the water, and finding, out of the animal body, the end of its creation, probably while its hinder part was still fixed within the body of the fish, it returned to it again, and from without pierced through it. Thus hanging at the outside of the fish, it is still shown in the collection of *naturalia* of this place. In other fishes these worms had only worked themselves through the entrails, and were hanging either at the inner side of the belly, or at the outside of the bowels. In the imperial cabinet of natural curiosities at Vienna, there is kept throughout the whole fine season, a vast quantity of birds, of all descriptions and species, for the purpose of establishing new researches into natural history. In those birds, which during a considerable length of time are kept in cages, there have almost never been found any worms; but it is also here to be observed, that with all possible care and trouble, one cannot get them the very same food, which they procure themselves, when in the state of natural liberty.

If, then, a bad quality of food, generally is to be considered as a cause of the formation of worms, we may not bring under this head any such diet, which upon the whole affords too little nutrition, but solely that food, which, though producing a sufficient, nay, with regard to the body that takes it, a superfluous quantity of nutritive substances, yet cannot be duly prepared by the stomach, nor its separated nutritive substances be entirely taken up by the absorbent vessels, and rendered homogenial with the mass of the human body, in this case given. The very

same dish, consisting of potatoes, pease, lentils, beans, and other leguminous or mealy food, which affords a most excellent nourishment to the laborious countryman, would, by a frequent use of them, cause worm diseases, besides a great many other complaints, to the idle and more feeble citizen.

Moreover, the notion, that leguminous or mealy food should be less nourishing than fresh meats, is a mere prejudice of the modern schools. The above-mentioned instance, relating to the inhabitants of Tyrol, who certainly are a stout, healthy, vigorous set of people, is sufficient to remove every doubt on this subject.

In former times it was likewise supposed, that the seed of worms was brought into the human body by the use of worm-eaten fruit, the dirt of any such worm, abiding inside the fruit, being considered as being its egg ; a supposition, which in our present times certainly does not require any refutation.

However, if once worms are formed out of themselves, or if they have procreated themselves within the human body, they can, even when the causes that first brought on their formation are removed, propagate by copulation, since all worms, known to abide in the intestines, are provided with genital organs. But to this propagation circumstances must also be favourable ; so, for instance, we see in children very often worms, that during a long while baffled all possible antidotes, disappear of themselves, when those children are ripening to a more mature age. In the same manner we see them extinguished in adults, whenever any change, either of clime or diet, takes place with them. Human diseases, or any distempers, are not seldom contributive also to the destruction of worms, of which the following part of this work will afford me an opportunity to communicate some examples.

ART. IV. *Lectures on the Operative Surgery of the Eye, &c.* By G. J. GUTHRIE, Deputy-Inspector of Hospitals, &c. &c. London, Burgess and Hill, 1823. pp. 517. With plates.

The general diffusion of knowledge concerning the diseases of the eye, among the members of our profession, has become so manifest, that it is unnecessary for us to touch upon the subject, farther than to allude to the advantages which the science has itself received from this occurrence. The most careless observer cannot fail to remark, that during the few years in which

this branch has been cultivated by men of liberal education and enlarged minds, more has been done for its advancement, than during centuries in which it was confined to the hands of a particular class, and separated by disingenious arts and unfounded prejudices, from its natural connexion with the principles on which the other parts of our art are founded.

Mr. Guthrie's work appears well calculated still farther to favour the progress of the impulse already given, and to promote that general information equally desirable for the profession and the public. We cannot pretend to give a complete view of all the valuable matter it contains, but we purpose, as far as our limits and abilities permit, to offer an abstract of the principles inculcated, and of the most important practical points.

On the Inversion of the Eyelids.—This disease is known by different names, as Entropium, Trichiasis, Distichiasis, &c. It has been supposed to depend—1st, On a false or irregular direction of the eye-lashes; 2d, On an augmented growth of them, forming, as was supposed, a double or treble row; 3d, On a vicious inclination of the edge of the eyelid, accompanied by either of the previous states of derangement of the eyelids. It is admitted that the natural direction of the eyelashes may be changed, but Scarpa and Boyer, with whom Mr. Guthrie agrees, deny the occurrence of an extraordinary growth, or the formation of a new row of hairs. The symptoms arising from the inversion of a single hair are very distressing, and sometimes give rise to acute inflammation; more frequently, however, when neglected, it becomes the cause of the inversion of the neighbouring cilia, and, by degrees, of the whole eyelid. The causes of inversion of the eyelid are necessarily different in different cases; sometimes a single hair takes a wrong direction after it has attained a certain length, and irritates the eye; ulceration on the edge of the tarsus, or on the conjunctiva lining it, or implicating the roots of any of the hairs, frequently gives rise to partial inversion of the cilia. Mr. Crampton has pointed out the contraction of the angles of the lids as the principal cause of the disease, and has indicated the proper mode of treatment. He demonstrates, that the levator palpebræ superiores was not inserted into the upper margin of the tarsal cartilage, but into the parts connected with it and with the conjunctiva. Mr. Guthrie states, that the inversion of the edge of the lid appears to depend on the contraction of the angles caused by thickening from previous inflammation; on the undue action of the orbicularis muscle, and particularly of the musculus ciliaris, as well as on a vicious

curvature of the cartilage. He concludes, from a review of the whole of the facts—

1st, That the derangement of the eyelashes is frequently the consequence of disease, but seldom or never arises from unnatural formation, or accidental growth of the cilia.

2d, That relaxation of the integuments, or partial paralysis of the levator palpebræ, are not primarily concerned in the formation of entropium, and never alone give rise to it, though, if other derangements take place, they may assist in its more complete formation.

3d, That in a complete inversion of the edge of the tarsus of the upper lid, the swelling of the external parts, and the spasmodic action of the orbicularis muscle, first tend to the formation of the disease, which is completely established by the contraction of the angles of the lids, and the accidental inversion of such hairs as become stiff and matted by the discharge from the meibomian glands and conjunctiva.

4th, That the change in the curvature of the lid takes place principally from the contraction of the angles whilst under the influence of the orbicularis, and not from the contraction of the conjunctiva, corresponding to the superior broad ligament, which supports the tarsus, and maintains the shape of the upper eyelid.

Little variation has taken place in the modes of treatment recommended for the cure of this disease from the time of Hippocrates, until the publication of Mr. Crampton's Essay, in 1806. The most common operation is that by which a fold of skin was destroyed or removed by different means, or by the knife, suture, and caustics of various kinds, particularly potassa fusa, and sulphuric acid; the latter first recommended by Helling, a German, in 1814, and extensively employed by Quadri and others. Experience having fully proved the inadequacy of these measures to relieve the symptoms in severe cases, Mr. Saunders was led to propose the removal of the edge of the eyelid, considering the inconvenience and deformity thus produced, as preferable to the continuance of the disease. This operation has been subsequently adopted by Dr. Jaeger, son-in-law to Beer, which may be considered as a tacit admission that the Germans are unacquainted with any better plan of cure.

"In cases of chronic inflammation," says Mr. Guthrie, "where there is a commencing, but incomplete general inversion of the cilia, the cure of the inflammation will be sufficient to restore the conjunctiva to its natural state, and the cilia to their original direction, without any especial means being employed for the cure of the commencing inversion; when this proves insufficient, he re-

commends the use of the sulphuric acid, according to the mode of Helling and Quadri, which is the following:—a small quantity of concentrated sulphuric acid is to be applied by means of a smooth piece of wood to the centre of the affected part of the lid, and rubbed along on an oval space, a little extending in length the part on which the inverted hairs are situated, and from three to six lines wide, according to the inveteracy of the disease; after the acid has been applied about ten seconds, the part is to be wiped dry, in order to prevent its passage into the eye. The application of the acid is then to be repeated, taking care that it may approach the edge of the eyelid, and touch the parts immediately over the inverted eye-lashes; it is to be repeated a third or a fourth time, until the contraction of the parts draws the hairs to their natural situation, in which they are retained by the contraction of the cicatrix remaining after the separation of the eschar. In inveterate cases, we have already said, that this operation was inadequate to effect a cure, and in such Mr. Guthrie recommends the operation proposed by Mr. Crampton, which he considers as equal to the cure of the worst cases. In order to perform it, the head being properly supported, the patient is desired to refrain from making any effort, and the surgeon is to wait until the lids are quiescent. He is then to introduce a narrow knife, or one blade of a blunt pointed scissors, close to the external angle, and to make a perpendicular incision, from a quarter to a half inch long, or sufficiently so, to render the eyelid quite free. Another incision is to be made in a similar way at the internal angle, but this should not include the punctum lachrymale. The length to which these perpendicular incisions should extend, must be decided on by the appearance of the part; they must be continued, if necessary, until that part of the eyelid containing the tarsal cartilage is free, and evidently not acted upon by the fibres of the orbicularis muscle. The part between the incisions is now to be everted and retained by the fore finger of the operator's left hand against the brow of the patient, and any remaining lateral attachments confining it to be divided. On letting the eyelid fall on the eye, the edge of the tarsus and the hairs will frequently appear in their natural position, but if the tarsal cartilage has become altered in its curvature, this will be immediately perceived, When this is the case, the cartilage is to be divided exactly at the place where it is bent, in a direction at a right angle with the perpendicular incision. Though the incision thus made scarcely exceeds one, and is never two-eighths of an inch at both extremities, and in general is only necessary at the inner, it enables the surgeon to remove the altered curvature of the part. The operation being thus far accomplished, a fold of skin is to be cut away from the part of the eyelid included between the incisions; three or four ligatures are then to be introduced, and after having brought the divided parts into contact, to be twisted, and fastened to the forehead by several short strips of sticking plaister. In raising the fold of skin, care should be taken to do it regularly with the fingers, and as close as possible to the edge

of the eyelid. It may then be grasped by the forceps of Beer, which have transverse pieces, slightly curved for the purpose, at their extremities, and cut away with a pair of scissors. The ligatures are to be first inserted at each angle, and when the vicious curvature is considerable, Mr. Guthrie recommends, that the inner one should include the outer edge of the margin of the eyelid, which retains the ligature longer than those passed through the skin, and tends to prevent the possibility of a relapse. The ligatures are to be drawn up until the eyelid is completely everted, and then fastened on the forehead. The edges of the incisions are to be touched with the cupri sulphas to prevent union by adhesion; and the parts cleansed and dressed. Great attention must be paid to the subsequent dressing, on which the success of the operation depends. On the following morning the dressings are to be removed, and replaced after the cleansing of the eye. On the second day great attention must be paid, that the ligatures keep the lid sufficiently raised, and if any adhesion has taken place at the angles of the incisions, it must be broken through. On the third day the plaisters attaching the ligatures to the forehead will in general require to be exchanged, and the edges of the incisions should be touched with cupri sulphas, or separated with the probe. The great art of the cure now consists in causing the incisions to be filled up by granulations only, so that the eyelid may be lengthened as much as possible, and which can only be effected by a continuance of the means indicated. In a few days more the ligatures cut their way out, during which period the eyelid is gradually lowered, and by the time the incisions have filled up, it will have resumed its natural situation, and the cure will be completed."—pp. 31-2., &c.

The operation on the under eyelid is analogous to that on the upper, but less severe, as the parts are more simple. It consists in a perpendicular incision made at the outer angle, and carried down so far as will perfectly relieve the inversion. One ligature is then to be inserted at the margin of the lid, and the threads fastened below the jaw by sticking plaister, so as to keep the eyelid everted. The subsequent dressing and treatment is the same as in the upper eyelid. In the worst cases, Mr. Guthrie advises that the inner angle, as well as the outer, should be divided, but without injuring the punctum laychrymale and lateral canal.

Relaxation of the upper lid.—This disease occasionally takes place without inversion or inflammation, but is for the most part symptomatic. It is only to be relieved by an operation, when it is the consequence of relaxation of the integuments from previous distention, and combined with atony of the levator palpebræ, or when it is congenital. The operation consists in the removal of a fold of skin from the eyelid, producing a contraction which counterbalances the previous relaxation. It

cannot, however, act on the muscle, so that when it is really affected, the operation only partially succeeds. A greater or less quantity of skin is to be removed according to the portion required to enable the patient to open his eye so as to correspond with the other. The skin to be removed should be from the integuments above the upper edge of the cartilage or nearer to the eyebrow, and not immediately over the tarsal cartilage as in trichiasis. Mr. Guthrie recommends the use of sutures, and believes that they assist materially in effecting a cure. In the case of paralysis the operation can do no more than raise the eyelid to a certain extent, so as to remove part of the deformity, and should follow rather than precede the treatment required by the general affection.

Eversion of the eyelid, or Ectropium, is rarely met with in the upper lid, and is also less frequent than inversion. Mr. Guthrie distinguishes four forms of the disease by the causes which produce them. 1. As depending on chronic inflammation accompanied by contraction of the integuments of the lid, but without any marked cicatrix. 2. As depending on acute inflammation with relaxation or swelling of the conjunctiva. 3. As depending on the contraction occasioned by a cicatrix on or near the eyelid. 4. As depending on paralysis.—According to the views of Mr. Guthrie, the indications of cure in the first species are, 1. to relieve the contraction of the skin; 2. to restore and retain the lid in its proper situation until the unnatural curvature of the cartilage be overcome, and the chronic inflammation be removed. The skin he supposes to become contracted from the irritation produced by the passage of the tears, and discharge over it from the meibomian glands during the chronic inflammation. The first indication is therefore to be fulfilled by washing the skin with warm water, so as to leave it as clean as possible, by drying it, and anointing it with Ung. Zinci, so as to protect it from the matters usually passing over it. The skin, thus relieved from irritation, becomes softer and more pliant, ceases to contract, and if it does not relax, is at least disposed to yield to mild extension. This, and with it the second indication, is to be effected in the following manner. The lid having been cleansed to prevent its slipping, the conjunctiva is to be wiped dry and everted as much as possible, so as to show the part where it begins to be reflected over the eyeball. The blunt end of a probe is then to be dipped in some sulphuric acid, and rubbed upon the conjunctiva of the lid, so that every part may be touched by the acid, taking care to avoid the ball of the eye, the punctum lachrymale, caruncle, and semi-lunar fold. The conjunctiva turns white wherever it is touched by the acid, and is

afterwards to be washed by a stream of water from a syringe. The acid should be reapplied every fourth day, and when managed in this manner does not cause a slough, but a general contraction of the lid, which, however, is only perceptible after two or three applications by its effect in inverting the lid gradually.

After six or eight applications the cure will be more than half completed, and in most cases of this species the thickening of the conjunctiva will have subsided. When the eyelid is nearly restored to its proper situation, the precaution is to be observed of admitting a longer interval between the applications of the sulphuric acid, for as its effect continues longer than four days, its constant use under these circumstances might produce an inversion of the lid, as sometimes really happens.

In the second species, the eversion consists in a fungous or granulated state of the conjunctiva, with, for the most part, a swelling at the angle where it passes from the lid to the ball of the eye. The indications of cure are, first, to remove the diseased growth of the conjunctiva; secondly, to restore the lid to its natural situation. In order to accomplish the first indication, recourse must be had to the knife, scissors, or such remedies as, acting partly as caustics, partly as stimulants, gradually restore the membrane to its natural state. Experience has shewn that the two former means are objectionable, and established the propriety of using caustics and stimulants. The particular means recommended by Mr. Guthrie are the sulphuric acid applied every four days, and the sulphate of copper every day, or every second day. Mr. Guthrie rejects in this species of the disease, the operation recommended by Sir Wm. Adams, which consists in the excision of the fungous conjunctiva, and in addition, of a triangular portion of the eyelid.

In the third species of eversion, that arising from the contraction of a cicatrix, there are two indications of treatment; first, to remove the cicatrix; and, secondly, to give such a permanent support to the eyelid as will enable it to resist the contractile power of the granulations during the cicatrization of the wound below. The first indication is to be accomplished by a single or double incision from a little below the external to the internal angle of the eye, following the curve of the eyelid and orbit, as far and as deep as may be found necessary for the removal of the cicatrix, and of the cellular attachments to the bone below. The second indication, Mr. Guthrie thinks, may be best effected by the removal of an angular piece of the lid, as proposed by Sir Wm. Adams, in the second form of the complaint, particularly if conjoined with the removal of the hori-

zontal fold of conjunctiva. The removal of the angular portion, and the approximation, by suture, of the edges of the wound thus made, shorten the part considerably, and bind it over the eye-ball, alter the vicious curvature of the cartilage, and bring it nearly to a straight line, thus opposing a degree of resistance sufficient to prevent any contraction during the healing of the wound left by the separation or removal of the old cicatrix. It is in general most advantageous to remove the angular portion, near to the external angle of the eye, and the quantity to be removed will never exceed a quarter, and seldom an eighth of an inch. The depth of the incision must be proportioned to the width of the ciliary margin, always however, extending beyond the cartilage. Two sutures are to be applied, one close to the margin of the lid, the other near the point of the angle; these may be removed on the third day to prevent the occurrence of ulceration. After the first dressing the wound made by the detachment or removal of the cicatrix is to be kept open by diluted blistering cerate, and not allowed to close until the granulations have reached the level of the surrounding parts.

Of the fourth species, or that dependent on paralysis, Mr. Guthrie remarks, that it is only to be treated effectually by such general means as relieve the original disease, and that except in young persons this can seldom be effected.

Wounds of the Eyelids, are neither dangerous nor difficult of cure. In consequence of the constant motion of the parts, and the absence of any point of resistance for the application of pressure, penetrating wounds generally require the insertion of one or more sutures to keep the edges exactly in opposition, together with the use of sticking plaister, compress, and bandage. When the lachrymal canal is divided, Mr. Guthrie doubts the possibility of its union in such a manner as to render it pervious. Contrary to Schmidt, he recommends the use of suture in addition to the means usually employed. In lacerated or incised wounds of the forehead, with extensive solution of continuity, recourse should always be had to one or two stitches, for if the incision be horizontal, and near or upon the eyebrow, as commonly happens, if the suture be neglected, an irregular cicatrix, with a slight falling of the lid, is very apt to ensue. Mr. Guthrie thinks that a defect or total deprivation of sight rarely takes place from wounds of the forehead, &c., unless the injury immediately affects a branch of a nerve of some size. The wounds or injuries are, for the most part, situated either on the forehead towards the nose, implicating the supra-orbital branch, and the nasal branch of the first part of the fifth pair of nerves, or immediately below the eye, affecting the infra-orbital branch of the second part of the

same pair. When the deprivation of sight is instantaneous, Mr. Guthrie suspects, notwithstanding any opinion to the contrary, that the eye itself has suffered from the general concussion. When there is an evident derangement of it, such as an extravasation between any of its tunics, the fact cannot be doubted, and the treatment has no immediate connexion with the wound, although the termination, under any management, will for the most part be fatal to vision. According to his observation, the eye, when amaurotic through injury of the supra-orbitary nerve, often shows little or no derangement of structure, the iris preserves more or less of its natural motions, and the information we acquire, is from the patient's declaration of his loss of sight, which is generally unaccompanied by pain. As to the treatment, if loss of sight immediately follows an injury, an incision should be made down to the bone at the part affected, so as to render it a clean incised wound, which should then be dressed simply, and moderate suppuration encouraged by poultices. If amaurosis should appear after cicatrization has commenced, the same kind of incision should be made on that side of the wound nearest the supra-orbitary foramen. If these should be found of no avail, after a few days, the operation of dividing the nerve, just above where it passes out of the orbit, should be attempted, as a last resource, although it is to be observed that Beer speaks of it as a measure deserving confidence. When the injury has been inflicted upon the eye, and the amaurosis is complete, or commences slowly, or after a few hours begins to subside, the division of the nerve must be useless, and may do harm. Here Mr. Guthrie recommends at first general or local bleeding, purgatives, warm fomentation, &c. At a subsequent period, stimulants, galvanism or electricity may be useful, if a partial restoration of vision be effected. If low, irregular, inflammatory action takes place, he trusts most to local bleeding, blisters or issues placed near the ear, and mercury given in such a manner as to affect the mouth quickly.

Encanthis.—This is by no means an unfrequent affection, and as it may, from its situation, come to produce more serious evils than the original disease, by the simple inflammation of the caruncula implicating the semi-lunar valve on one side, or the lachrymal duct on the other, it may be as well to give Mr. Guthrie's mode of treating the disorder.

"The treatment of simple inflammation of the caruncula lachrymalis must depend upon the nature of its more obvious cause; and as it most frequently arises from the presence of an irritating substance, the part itself, as well as the inside of the eyelid, should be

carefully examined, and every extraneous substance removed. Dr. Monteath says he has seen it originate twice from a loose eyelash sticking in the superior punctum lachrymale, and irritating the caruncle. When no immediate exciting cause can be discovered, several leeches should be applied to the neighbourhood of the part, and one should certainly be placed on the inside of the lower lid, close to the inflamed caruncle, the bleeding from which should be encouraged by repeated fomentations with warm water; and I would advise a repetition of the leeches until it is evident that the progress of the inflammation towards suppuration cannot be prevented, when a slight poultice of bread and water should be had recourse to till the abscess is duly formed. I do not coincide in the opinions of foreign writers, who recommend cold water, and cold applications, generally, instead of the more active practice I have advised; and which may, perhaps, be one cause of the great frequency of the disease abroad, compared with its occurrence in England. When suppuration has unfortunately taken place, the treatment should still be, in the first instance, of the mildest nature, followed up by slight astringents; but if these should not be sufficient to prevent the appearance of the fringed-like or fungous growth alluded to, recourse must be had to the infusum sabinæ, the sulphas cupri, and the argentum nitratum. The Germans recommend that they should be sprinkled with a powder composed of sacchar. alb. ʒij, aluminis usti gr. xv, zinci sulph. gr. iv; but in this I place little comparative confidence.

"When the fringed-like excrescences, or the more solid mulberry growths, are not the sequelæ of abscess, but the products of inflammation, which has not attained to suppuration, they should be at once cut off with the scissors, and the parts from whence they sprung touched a day or two after with the sulphate of copper, by which treatment I have never failed to effect a cure, taking care, however, to continue the latter part of the treatment until every vestige of the disease was removed; which should also be done in every case, whatever course the complaint may have taken."

"The continental writers are disposed to consider that syphilis has a tendency to induce encanthis to assume a cancerous character; but as there is no deficiency of the one, whilst the other is, happily, a rare disease in this country, either in its benign or malignant form, there is reason to believe that those inferences as to the syphilitic virus, are as badly founded in this complaint, as in most others to which the same train of reasoning is applied."

Extraneous Substances in the Eye.—In the following directions for removing accidental extraneous substances from the eye, Mr. Guthrie has not mentioned, what we have often found useful in minor cases, namely, a small cone of writing paper, brought to a point like a camel hair pencil, and moistened, to take off the harsh corners. Sawyers, who frequently

get particles of saw-dust into the eye, use the head of a pin to remove them.

" Whenever the admission of an irritating matter between the eyelids is suspected, they should be carefully examined; the lower one offers no difficulty; the upper lid should be everted in the following manner: The patient should be placed on a chair. lower than the surgeon; who taking hold of four or five of the cilia in the center, and close to the edge of the eyelid, gently draws them downwards and outwards from the ball of the eye. A probe, or other small round or blunt instrument, is then to be placed horizontally across the lid, immediately above the upper edge of the tarsal cartilage, when, by raising the cilia, which have been already grasped by the fore-finger and thumb, the eyelid may be turned out over the probe; the offending matters will be in general found adhering to the everted surface. If the patient be desired to look downwards with the other eye, the whole of the conjunctiva may be readily examined. When surgical aid is not at hand, I have seen ladies in the country slightly raise the eyelid in the same way, and introduce the tip of the tongue underneath it, by which a foreign body may be often brought out. The sensation is peculiar, but not unpleasant."

" When a small fly, or any substance which is not sufficiently pointed to stick into or fasten to the conjunctiva, gets between the lids, there is an action set up in the orbicularis muscle for its removal, which, together with the flow of tears, will frequently be successful, provided the person remain perfectly quiet, and not strain the eye; at the end of a few minutes it will be found at the edge of the lid, and may be readily removed by a by-stander."

" There is never any difficulty in discovering a foreign body implanted in the cornea, and it ought always to be removed, in the following manner, as soon as perceived. The operator standing behind the patient, supports his head against his own breast while he elevates the eyelid, and maintains it against the edge of the orbit, with the fore and middle fingers of the left hand, fixing the eyeball with the extremities of them at the same time. If the eye be very unsteady, an assistant should depress the lower lid, and fix the eye in the same manner from below. Having selected a sharp, firm, cataract needle, he should first touch the cornea with the side of it, to accustom the patient to the sensation it produces, and then introducing the point below the foreign body, raise it from its situation and remove it from the eye. This proceeding will frequently require repetition before it succeeds, and in some instances it has very much the appearance of digging the extraneous substance out of the cornea, in consequence of the tenacity with which it adheres. It is a very common accident with smiths, but seldom gives rise to inconvenience, as I have rarely seen a patient twice after a bit of iron was removed, although it had actually required to be dug out of the cornea. A slight opacity is generally

observable afterwards in a certain light; but I have not always been able to discover it unless the speck of iron had remained imbedded in the cornea for several days, and ulceration had commenced. When this is the case, the eye will be very irritable, the patient can scarcely bear to have it examined, and the eyelids seem to close spasmodically: this is best relieved by the removal of the cause, and it is a waste of time to have recourse to poultices or narcotics, as some foreign writers have recommended."

Pterygium.—This disease consists in an alteration of a portion of the conjunctiva, of a triangular or pyramidal shape, the apex of which is turned towards the cornea, whilst the base originates at the circumference of the eye, or more properly at the reflection of the conjunctiva from the lids to the eyeball. Its causes are obscure. Mr. Guthrie contradicts that which Scarpa has assigned, and which is very generally admitted, we mean chronic inflammation of the conjunctiva. From his own experience of that disease, and from the observation of many of his friends, he states that a true pterygium is very rarely the consequence of chronic inflammation, and that an essential difference exists between those nebulæ of the cornea which simulate the appearance of pterygium and the true disease itself. The cure of the well formed pterygium should always be accomplished by its removal. When slight, it may sometimes be cured by scarifications and stimulants, but the cure by these means occupies a great deal of time, is often not complete, and the patient is frequently obliged to submit to the operation after a delay of several months. The operation consists in the removal of the diseased part, and is perfect, as far as relates to the termination of the disease; but a slight defect remains in the cornea, from the cicatrix which follows the removal of the conjunctiva; much less however than the extent of surface occupied by the pterygium.

To perform the operation, an assistant is to fix the head of the patient and separate the eyelids. The surgeon should then desire the patient to turn the eye outwards, if the pterygium arises from the inner canthus; and whilst it is thus stretched, take the opportunity of grasping it between the points of the forceps, about two lines from the cornea, and then raise it from the sclerotica, until he has room to pass an iris or spear-pointed cataract knife under it, and to the inside of the forceps, when it is to be cut through from within outwards. The extremity of the pterygium being still held by the forceps, will allow the operator to cut it off close to the cornea, with the knife or the curved scissors. If any portion of the edge of the pterygium be left, it must be removed with the scissors; the eye should be

washed with warm water until the bleeding ceases, and then covered with a compress and bandage. A process of suppuration and cicatrization succeeds, and continues from two to three weeks; it requires no assistance from art, and should not be interfered with, unless it appear that some irregularity or elevation is about to take place, where the spot should be lightly touched with sulphate of copper or lunar caustic.

Extirpation of the Eyeball.—To perform this operation, the patient's head being firmly secured, the upper eyelid should be raised by an assistant, whilst the surgeon passes a needle with a ligature through the anterior part of the eye. The lower lid being depressed, the surgeon should cut through the external commissure, down to the edge of the orbit, with a small straight but rather long and pointed scalpel, and then divide the conjunctiva and fat round the eyeball, beginning at the under part, to prevent the blood from above impeding the operation. The eyeball may then be gently drawn outwards, to facilitate the remaining part of the operation, which consists in cutting deeply into the orbit with a pair of scissors curved on the back, or in dividing the same parts with a sharp-pointed narrow knife curved in the same way, introducing it at the temporal angle, and carrying it round the eye until it be released from its attachments. Mr. Travers prefers the knife, but Mr. Guthrie agrees with Beer in recommending the use of the scissors. To prevent the hemorrhage from impeding the operation, an assistant should wash away the blood, by injecting water into the wound from a syringe; and when the eye is removed, the operator must carefully examine the orbit with his finger, to ascertain that neither the lachrymal gland, nor any diseased parts be left behind. When the bleeding has ceased, the eyelids are to be closed, the division of the external commissure is to be supported with sticking plaister, and the orbit to be covered with a light compress and bandage. When the eyelids are diseased, and the extirpation of the contents of the orbit is still considered advisable, they must also be removed.

Mr. Guthrie has entered largely into the consideration of cataract, treating of the nature, symptoms, causes, diagnosis, and classification of the different forms of this affection. We cannot pretend to follow him through such an extensive subject, and shall confine our endeavours principally to give some idea of the advantages and disadvantages attending the various modes of operating, as applicable to the different species of cataract, premising only his diagnoses of muscæ volitantes, and glaucoma.

Muscæ Volitantes.—The frequency of this varied affection,

and the alarm which it often creates to the patient, make it of more importance to the practitioner than it usually receives attention.

"By muscæ volitantes are understood a variety of appearances moving before the eye, such as small threads or filaments assuming the form of worms, zigzags, or spots of greater or less dimensions, but generally small; little globules or webs, or luminous spots sometimes surrounded by a halo, which always move before the eye, and are never FIXED.

"These are most readily seen on raising the eye quickly from the ground towards the sky, when they appear to ascend whilst the eye is in motion, and to descend on its becoming fixed steadily upwards, as if they had been disturbed from, and were returning to their original situation below the axis of vision. Of the different kinds of muscæ volitantes, the filamentous particles, turning and twisting in various directions, are the most common; two or three of which are generally more conspicuous than the rest, although accompanied by an infinity of others less distinguishable, intermingled with small globules, which fall like a fine mist when the eye has been gently raised and fixed on a white wall, or on the sky on a clear day. The filamentous particles, being apparently the lightest, descend the last, assuming the appearance of twisted semi-transparent tubes, or worms, spotted in different places.

"In the evening, or by candle light, these spots are scarcely to be observed; they are not very perceptible in a room which is rather dark, are but imperfectly seen when looking at the flame of a candle, and but feebly marked when the eyes are raised to the sky, with the lids shut, on a fine clear day. They appear much more brilliant on a clear or bright day, when the lids are half closed; they are also very distinct on a misty day, or when attention is paid to them in a light reflected from water or snow. These spots always appear to sink below the axis of vision by their own weight, when the eye is simply turned upwards; and this opinion seems to obtain great support from their falling and collecting, as it were, into a focus in the axis of vision, when this point is made the most dependent by bending the head forward and looking on a white and sandy soil."

"Demours * has concluded, and with great probability of truth, that these appearances arise from small portions of the humor Morgagni, which, without losing their transparency, have acquired an increase of density, weight, and refractile power †.

"The principal diagnostic mark of these appearances is their *mo-*

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* "Demours, Traité des Maladies des Yeux, page 400 et seq."

† "The existence of the humor Morgagni may be demonstrated in the eye of a sheep, in the following manner: cut away the cornea, remove the iris to one side, and wipe the capsule of the crystalline dry. Then plunge the point of a lancet into it, and a small drop of this humour will flow out, although it appears to lose its fluidity in some instances after death, and to diminish in quantity as we advance in years."—See Dr. Jacob's opinion in the Quart. Hist.

bility, which distinguishes them in a very decided manner from the fixed spots often perceived in the eye, and which depend on opacity of the lens, or a defective state of the retina. Muscæ volitantes are incurable, seldom pass a certain point, and when the patient is assured of their not proceeding further, appear to be lost sight of, and to give no inconvenience, unless when the attention is directed to them. They are very rarely followed by cataract or amaurosis, and it is a great consolation to the patient to be assured that they are not dangerous."

Glaucoma.—The experienced surgeon can seldom, if ever, mistake glaucoma for cataract; but it is a very frequent stumbling block to the young practitioner.

"The disease termed Glaucoma consists essentially in an alteration of the component parts of the vitreous humour, accompanied by derangement of structure of the hyaloid membrane, of the retina, and tunica choroidea, the vessels of which are always more or less in a varicose state. The lens is generally at last implicated, although the disease may exist for a considerable time without any visible alteration in it. It is never primarily affected. When the disease is fully formed, so as to be confounded with cataract, or to render a diagnosis necessary in order to prevent a useless and dangerous operation; the symptoms are as follow: The eye has a general unhealthy appearance, arising from a turbid state of the cornea, which has lost its brilliancy, although in no one part has it become opaque. The sclerotica does not preserve its natural appearance, being either more of a bluish or yellowish colour, whilst several tortuous dark red vessels may be observed, especially on the under and upper part of the eye, which do not run on to the cornea, but penetrate the sclerotica at a distance not exceeding the eighth of an inch from it, and sometimes less, giving rise, when they are numerous, to the appearance of a white ring or circle, situated between them and the cornea, They are varicose vessels, coming from within the eye, and intimately connected with varicosity of the vessels of the choroid coat; and as that state of disease increases, they assume a darker red or blue colour, become larger and more tortuous, often communicating with each other where they penetrate the cornea, forming also a sort of vascular ring, exterior to the bluish-white one already noticed. If the eye is examined by the touch, it will be found rather firmer or harder than natural."

"The iris, if only one eye is affected, differs a little from its natural colour; if formerly blue, it has now become grey; a black iris changes to a dirty brown, but this alteration is of no consequence compared with the state of the pupil, which is dilated, unless inflammation of the iris, which is not an essential characteristic of the disease, has been superadded to it. The dilatation of the pupil is always accompanied by a marked irregularity of its edge, sometimes rendering it angular, whilst it is always perfectly fixed or immoveable, and occasionally drawn to one side, sometimes to

both, rendering the pupil oval *. The patient cannot distinguish light from darkness. The diagnosis of a disease that cannot be relieved by operative surgery is now sufficiently established, and no man of the slightest pretension to discrimination ought to be deceived by the appearance of a lenticular opacity behind the iris, which can or does only appear after these previous symptoms have become most marked or apparent. With their commencement a change may be observed behind the iris ; the pupil, instead of looking of a brilliant black, looks dull, and the distance to the posterior part of the eye may be estimated, and its concavity observed. This concave appearance soon becomes of a dull yellowish colour, tending to green, loses the transparency it possessed, becomes turbid, but evidently confined to the back of the eye, so that the thickness of the lens in situ may be accounted for anterior to it. As the disease advances, and the other symptoms become more marked, the greenish yellow colour increases in intensity, and the space occupied by the lens now becomes gradually implicated by it ; the lens swells, presses the iris forwards into the anterior chamber, and a cataracta glaucomatosa is completely formed. In many instances the lens never becomes so opaque as to give rise to the appearance of cataract. In some rare cases, this opacity of the lens is so entirely free from any glaucomatous tint, and even possesses so perfect a character of a striated opaque lens, that if the appearance of it alone were to guide the judgment of the surgeon, the disease would be pronounced to be "cataract." The internal symptoms accompanying such cases are, however, so marked as to prevent error, even if the external ones have been mistaken."

Cataract.—For the purposes of regulating the choice of operations for cataract on general principles, Mr. Guthrie arranges cataracts in three classes ; the hard, the soft, and the capsular ; the hard, admitting only of extraction and displacement ; the soft, seldom of extraction or displacement, but usually of division ; the capsular, neither of extraction, displacement, nor division, purely considered as such, but by laceration and removal of the opaque body from the axis of vision by different operations ; which, although they may partake of the nature of all, are yet not precisely any of them. The operation of extraction is a radical cure of the complaint ; it is performed in a very short space of time, and when successful, causes the least disturbance to the internal parts of the eye. In addition to the

* "The elongation of the pupil towards the canthi is considered, by the German ophthalmologists, as a very important diagnostic sign of glaucoma ; it appears to me to be only an accidental occurrence. In the same manner, they suppose a drawing of the pupil upwards and inwards towards the nose, to be a diagnostic symptom of syphilitic iritis, which is not the case in England. The eyes of the good people of Great Britain and Ireland seem rather repugnant to such minute arrangement."

signs of a hard cataract, this operation is only proper—1. When the eye is of its natural firmness to the touch.—2. When it is not sunk back into the orbit, so as to render the division of the cornea difficult.—3. When, on the other hand, it is not very protuberant ; for when the eye is full, the under eyelid is found to press against and raise the edge of the incision.—4. When the eyelids open well, and are not contracted, which contraction may be a natural formation, or the consequence of chronic inflammation.—5. When the lids are free from œdema, the conjunctiva, meibomian glands, and lachrymal passages from irritation or inflammation.—6. When the cilia are straight, and the eyelid perfectly regular ; for if there be the slightest inversion, it will irritate, and produce the worst effects.—7. When the cornea is transparent, and has not been lately subject to inflammation.—8. When the anterior chamber is of fair dimensions, and the iris plane, not convex.—9. When the iris is dilatable. If the pupil do not dilate on the application of belladonna, the cataract is adherent, and this operation should not be attempted. 10. When the pupil is not too much dilated ; as this would probably lead to a protrusion of the vitreous humour.—11. When the iris is healthy, and its motions steady ; for if the motion be vibratory or tremulous, there is probably either a very dissolved state of the vitreous humour, or an error in diagnosis, the cataract being capsular and not lenticular.—12. When the eye is free from other derangement or disorganization.—13. When the patient is healthy, and not labouring under any constitutional affection.—And 14. When the patient has sufficient control over the eye to keep it steady, and when, above all, it is free from spasmodic or convulsive twitchings.

The operation by displacement may be performed in every case in which extraction ought to be attempted, and can be done in several in which extraction would be improper. The disadvantages by displacement follow the operation, those of extraction rather accompany it. It may be done—1. When the eye does not appear perfectly firm to the touch, and the surgeon is doubtful of its being a fit case for extraction.—2. When the eye is deep in the orbit.—3. When the eye is protuberant, when the lids are contracted or diseased, when there is affection of the lachrymal passages or inversion of the lower eyelid.—4. When the cornea is partially opaque, and not likely to heal if an incision be made into it.—5. When the anterior chamber is nearly abolished from the flattening of the cornea.—6. When the iris is either not sufficiently dilatable, or is too much dilated, or when the iris is in a vibratory state.—7. When there are doubts as to the healthy state of the eye, and the chance of an opera-

tion is desired.—8. When the patient is in a doubtful state of health.—And lastly, when he has not sufficient control over the eye to keep it steady, or it is subject to spasmodic or convulsive motions. The two most essential objections to this operation are the occurrence and continuance of constant and violent pain after the operation, and the ascension of the lens. In the old operation of depression, the injury occurred in consequence of the lower edge of the lens forcing up the retina and injuring the choroidea, in the conveyance of the whole below the level of the pupil. The operation of Scarpa, and the method by reclination, have for their basis this principle; that the lower edge of the lens must not be forced down so as to injure either the retina or choroidea, but that it must be placed on its flat side, the lower edge turned forwards, and deeply lodged at the same time in the vitreous humour, where it gives rise to no inconveniences, thus preventing the disadvantages of depression.

The advantages of reclination through the cornea over that through the sclerotica, are supposed to be, that the injury of the cornea is of less importance than when the needle penetrates through the sclerotica, that the whole of the internal parts of the eye are avoided by the anterior operation, and that the operator can see every motion of the needle. The disadvantages are, that the lens cannot be so well nor so steadily depressed, that the neck of the needle in doing it is apt to press on the iris, however well dilated the pupil may be; and that from the lens not being so well depressed after it is reclined, it is prone to advance and press on the iris with its lower edge, thereby causing irritation, low inflammation, and closure of the pupil.

Mr. Guthrie thinks, and brings many strong arguments to prove it, that the evils said to arise from penetrating the sclerotica are greatly exaggerated; on the other hand, he asserts that the principal advantage supposed to result from penetrating the cornea, viz. the absence of inflammation, does not compensate for the greater difficulty experienced in sufficiently reclining the lens; and as a subsequent and more dangerous inflammation is likely to arise from this cause, he considers the reclination through the cornea, is not entitled to a preference over reclination through the sclerotica. There can, however, be no comparison between reclination through the cornea and the old operation of depression.

In relation to hard cataract he disposes the operations in the following order, subject to a due consideration of the different states of eye requiring them: 1. Extraction; 2. Reclination through the sclerotica; 3. Reclination through the cornea: abandoning altogether the operations by puncture or division

of the lens, and only admitting a compound operation, commencing by displacement, and ending with extraction, when the lens has accidentally fallen into the anterior chamber, during the performance of the previous steps for its reclination.

The operation by division is only applicable to soft cataracts. If the nucleus of a caseous or soft cataract be large and hard, extraction is much more likely to answer than division. The advantages of division are—1. The facility with which the operation is performed.—2. The capability of doing it in all cases in which extraction and displacement are recommended.—3. The avoiding the dangers admitted to attend extraction and displacement.—4. The total removal of the lens and its capsule by absorption. The disadvantages attending it are—1. That it can, or ought to be done only in cases of soft cataract.—2. That it frequently requires to be repeated, and therefore occupies a longer space of time than the other operations.—3. That if the diagnosis be bad, it must be begun in a case in which it cannot succeed, when recourse must be had to depression or extraction.—4. That it is occasionally attended by severe inflammation, giving rise to amaurosis.—5. That vision is not so perfect as after extraction. Here, as in the case of displacement, Mr. Guthrie thinks the operation through the sclerotica generally preferable to that through the cornea.

In cases of capsular cataract, arising from absorption of the lens, the removal of the capsule is difficult of accomplishment, and is seldom effected by one operation. Hence Mr. Guthrie advises that the capsule be first separated, as much as can conveniently be done from its attachments, by one operation posterior to the iris with the needle, and then extracted at a subsequent period through a small opening in the cornea. When the capsular cataract is secondary, and takes place as a consequence of extraction, it usually adheres to the whole edge of the pupil, and is for the most part so thin, as to be readily torn by the needle, for which purpose Scarpa's is best. It is to be introduced in the usual manner until it can be seen behind the capsule, when the point is to be turned forwards, and the capsule freely lacerated; any shreds which remain attached to the edge of the pupil may be again torn, if they appear likely to float into the axis of vision; but when the capsule is thin, they shrink up, although the pupil will in general be fixed, from this as well as other adhesions of the iris. The same proceeding may be followed where the capsular cataract has succeeded division, and has not become siliquose, provided the pupil can be largely dilated with belladonna. If this cannot be accomplished in consequence of adhesions formed between the iris and cap-

sule, the point of the curved needle must first be carried to the points of adhesion, in order to separate them previously to lacerating the capsule. When the capsule is not siliquose, yet apparently too much thickened to be easily lacerated, it often yields to the pressure at its ciliary attachment, rather than be cut or torn by the needle at its centre. When this is the case the operator should detach it in every part, save that near which the needle entered, and endeavour to depress it. If this attempt should fail, and the capsule floats again into the axis of vision, it ought to be removed as in the first instance, through an opening in the cornea.

In congenital cases, when the cataract is capsulo-lenticular, Mr. Guthrie prefers the posterior operation for the destruction of the capsule, to the anterior, as recommended by Mr. Saunders. When the cataract is fluid, and the capsules opaque, he advises the same operation, making use of Scarpa's or the curved needle, which offers a greater facility in destroying the capsule. The complete dilatation of the pupil yields so large a sphere for its action, that an error can scarcely be made by any one accustomed to its use ; and if, after the fluid has been absorbed, the capsule should not appear to have been sufficiently destroyed, the operation for capsular cataract already described must be resorted to.

We have thus touched on some of the most important parts of Mr. Guthrie's book; others, which are more systematic or less generally interesting, we have passed over ; among the latter is the subject of artificial pupil, which occupies a considerable part of the volume, but which consists almost wholly of the distinct and well known treatise which the author has already given to the public, and which does not consequently require our analysis.

ART. V. *Elemens d'Anatomie Generale, ou description de tous les Genres d'organes qui composent le corps humain.*—Par P. A. BECLARD, Professeur d'Anatomie á la Faculté de Medecine de Paris.—Paris, 1823. pp. 728.

Whatever may be the merits of our country in practical medicine, it must be confessed that the study of the sciences accessary to it, and in particular of anatomy, is amongst us greatly neglected. Anatomy on this side of the water is seldom, perhaps never, cultivated as an independent science, or as

a branch of natural history; its utmost limits and its highest utility are supposed to consist in the assistance it affords to the practice of surgery. The manner in which it is taught perfectly accords with the estimation in which it is held; we can well figure to ourselves the astonishment of strangers, who are gravely told that in our metropolitan schools, between three and four months are devoted to an anatomical course so called, but which in fact is a strange medley of anatomy, physiology, morbid anatomy, pathology, and the principles, practice, and operations of surgery. And yet we doubt not that we should give offence to many, were we to assert that this metropolis is not the best anatomical school in the universe. If our anatomical instruction be defective, the literature of the science with us is still more so: to tell the truth we have not any good treatise or system, even of descriptive anatomy, the first and most mechanical branch into which it is divided. Indifferent as our books are in themselves, their deficiency becomes still more striking, if we compare them with those of which other countries so justly boast. What work do we possess, that can for a moment be put in competition with the systems of Söemmering, Sabatier, or Boyer, or with the descriptive anatomy of Bichât, or the more recent one of Cloquet? In fact, if the student's wish was thoroughly and perfectly to study descriptive anatomy, it is no longer a matter of choice, he will be compelled to have recourse to the works of strangers to assist his progress. We do not pretend to say that our teachers and anatomical writers are wholly to blame for this national disgrace, for though we cannot entirely acquit them of indifference and want of exertion, the fault most certainly rests with the profession at large, and with the narrow and confined ideas of the value of anatomical science in the practical parts of medicine, which are so generally received. Who is bold enough to attempt, or powerful enough to succeed, in setting himself in opposition to received opinions, especially when those opinions favour the indolence to which men are always more or less inclined? Some, it is true, seeing the necessity of exertion have done so, but hitherto their labours have not produced any striking effect; and here we cannot but take an opportunity of expressing our regret in common with others, that our country and profession should have been robbed of the late Dr. Gordon, at a time when his industry and talent bade fair to have in a great measure wiped away the opprobrium we have stigmatized.

If we are deficient in our knowledge, (or perhaps we ought rather to say in the arrangement of the knowledge we possess), of descriptive anatomy, we have still less to boast of on the subject of M. Beclard's book. The science of what is called

general anatomy, is totally unknown in the schools of this country; it forms no part of a medical education; at least as a matter of necessity or of custom. The mention of the term would be to many of our countrymen the first intimation of its existence. In fairness, we put Bichât's Anatomie Générale out of the question, for it belongs to all countries, but let those who think, that we have arrived at a high pitch of perfection, tell us how it is that it has never appeared in an English form; or inform us by what proportion of the profession in this country it is studied; or why, independently as we say of Bichât, why we have not any such treatises as M. Beclard's—J. F. Meckel's*—Meyer's†, &c.? The science first originated in this country, for the remarks of Dr. Carmichael Smyth on the nature and effects of inflammation in particular structures, (Med. Communic. Vol. 2.) if they did not give rise to the arrangement adopted in the Nosologie Philosophique of Pinel, and through that medium to the Anatomie Générale of Bichât, at least preceded both. It has ever since remained neglected and nearly unnoticed amongst us.

It would be a task of some difficulty to assign the causes of this occurrence. A circumstance which may be considered partly in the light of a cause and partly as an effect, is the preponderating influence of surgery in the schools of the metropolis. It is too well known to need much proof that an acquaintance with that branch of the healing art is held out to students, and considered by them as the highest point of professional attainment; unfortunately too, the young man is generally inclined to fix his attention rather on the practical or manual part than on the principles which should guide him; were it otherwise, the evil we complain of would not exist; for we hold it to be undeniable that an acquaintance with the principles of surgery implies a thorough knowledge of the principles of medicine, strictly so called. We say that this preponderance is partly cause and partly effect; a cause for this reason, that teachers of anatomy being almost exclusively surgeons, unconsciously fall into the error of supposing that the relations of anatomy are limited to the science they themselves profess; an effect, because if it be once admitted that the application of anatomy is thus confined, the degradation of medicine from the rank of a liberal science to that of an empirical art follows almost as a necessary consequence. It is often said that anatomy is of no use to a physician, and we are almost inclined to agree with the assertion, if by anatomy be meant the art of laying bare an ar-

* Meckel, J. F. Allgemeine Anatomie. Halle und Berlin. 1815.

† Meyer—Ueber Histologie, &c. Bonn. 1819.

tery, or tracing a branch which, as has been happily said, would not bleed if divided; and other important matters of the same description. The anatomy of the relative position of parts is certainly not essential, though perhaps not wholly useless to the physician, but we will assert that without a knowledge of general anatomy, of the anatomy of structure in health and disease, there cannot be any physiology, and without physiology no pathology; and without pathology no possibility of rational or successful practice.

We come now to the consideration of the book before us. It is a summary of the anatomical course delivered by M. Beclard for the last ten years: the volume at present published may be looked upon either as a distinct treatise on general anatomy, or as the first part of a treatise on the science at large. It consists in a methodical digest of the contents of Bichat's great work, rendered more valuable by the incorporation of M. Beclard's additions, of which we have already given an account in a former number, and of a multitude of new and important facts which have been collected since the publication of those additions. The treatise itself is preceded by a considerable quantity of preliminary matter, which has perhaps in general a closer connection with the science of physiology than of anatomy; it is too good, however, to be much misplaced. The first section treats of organized bodies; of animals in general; of vertebral animals; and of oviparous vertebral animals. The second section is occupied with the consideration of the human body; of its humours; of organs; of organism, in other words of life; of the developement and differences of organization; of changes of organization; of death, and of the dead body.

Our extracts from M. Beclard's additions to Bichat's great work, to which we have already alluded, were so copious, that it would only lead to repetition, were we to recur to the greater number of subjects treated of; we have therefore preferred to attach ourselves to a single one, and we know not of any which merits more attention, and has made more rapid advances than the study of the nervous system.

The most simple animals have not any nervous system: the first in which it becomes perceptible are radiated animals, particularly the asteriæ, in which it consists of soft filaments, and small swellings disposed round the mouth, and both white, without any grey substance. In all other invertebral animals, the nervous system consists of two cords more or less approximated, collected into a greater or less number of knots, or ganglia, improperly called spinal marrow, in the articulata, always united around the œsophagus, or above the mouth, by

at least a nervous ring, and often by a swelling or ganglion, the size of which is proportioned to the degree of complexity of the structure of the head, and which is called a brain in the mollusca. In all these animals, the integuments and the muscles, the organs of the vegetative, and those of the animal functions receive similar nerves.

In vertebral animals, the nervous system consists in a central mass proper to them, and composed of a longitudinal cord, in which the appearance of ganglia no longer exists, and of which the cranial extremity, divided into three pairs of cords, presents swellings and developements, the combination of which forms the encephalon; these are the cerebellum, the tubercula quadrigemina, the brain, and the olfactory lobes. The spinal cord gives attachment to pairs of nerves proportionate in number to that of the vertebræ, each nerve possessing a ganglion near its central extremity. In addition there exists on each side, in front of the vertebral column, a knotted cord (the sympathetic,) and ganglia, with nervous cords for the heart and alimentary canal, forming a peculiar system, which alone, or joined with the pneumo-gastric nerve, resembles in its form and distribution the first appearances of the system which present themselves in the animal kingdom.

The nervous substance submitted to the examination of the microscope, and magnified about three hundred diameters, appears composed in all parts of semi-transparent globules, united by a transparent viscous substance. Prochaska, on examining with the microscope a layer of nervous substance, sufficiently thin to be transparent, found that it resembled a sort of pulp, formed of innumerable globules; by the action of water, this pulp divides into little flocculi, each composed of a certain number of globules; and maceration continued even for three months is insufficient to separate the globules from each other. Hence he concludes that the uniting medium is a delicate cellular structure, formed partly by vessels, and partly by prolongations of the coverings of the system; the globules appeared to him of various sizes in different parts of the system; those of the brain he estimates at about an eighth of the size of the blood globules; as to the structure of the globules the most powerful microscopes do not give any information. According to Sir E. Home and Mr. Bauer, the nervous system consists of globules which are white, semi-transparent, some of them being of the size of those which form the nucleus in the colouring particles of the blood, and others smaller; of a gelatinous, transparent substance, soluble in water; and of a fluid, like the serum of the blood; the variable proportions of these

three parts, as well as the size of the globules, giving rise to the principal differences of the nervous system.

Of the Nerves.—The nerves may be divided, 1st, Into nerves with a double root, the one attached to the anterior, the other to the posterior column of the spinal cord; these are the spinal nerves, the sub-occipital, and the fifth pair of cerebral nerves; they are devoted to the purposes of sensibility, and voluntary motion in combination. 2d, Nerves with a single root; these are the olfactory, optic, and auditory nerves; the third, fourth, and sixth pairs of nerves, the motors of the eye; and the twelfth pair, the motors of the tongue; these nerves are devoted to sensation or to motion exclusively, but not to both. 3d, Respiratory and vocal nerves, and nerves of expression; they are connected with the lateral band of the upper part of the spinal marrow; and are, according to Mr. C. Bell, who first distinguished them, the vagus, which is the centre of this system, the facial nerve, the glosso-pharyngeal, the accessory, the diaphragmatic, and the external thoracic. 4th, Circulatory nerves, which are connected with the spinal nerves; these form the great sympathetic.

The relative size of the two roots or points of attachment of the spinal nerves has been variously stated: in the brachial nerves the posterior root is the largest as M. Gall has remarked; the contrary is the case in the crural nerves. These roots unite in the intervertebral foramina, where the posterior presents a swelling or ganglion, to which the anterior is merely attached, without assisting in its formation.

The plexus of nerves are simply numerous minute anastomoses; they are so disposed that the nerves issuing from them derive their origin from all or a greater part of the nerves of which they are composed.

Of the ganglia and sympathetic nerve.—The lower animals the radiata, mollusca, and articulata, have nervous swellings, which have been assimilated to the ganglia of vertebral animals. But in the invertebral animals the same nerves belong to organs and functions of every kind, whilst in the vertebral animals the sympathetic nerves, and in a certain degree the pneumo-gastric ones belong specially to the organs of the vegetable functions. M. Weber (De System. Nerv. Organic. Lipsiæ. 1817.) has compared the ganglia of the lower animals to the spinal ganglia of the vertebral ones.

In the vertebral animals, the only ones which have ganglia that can be compared with those of the human species, these organs are seen to augment, particularly those of the sympathetic nerve, and the pneumo-gastric nerve to diminish in pro-

portion to the developement of the encephalon; so that in fishes the sympathetic nerve is the smallest, and the pneumo-gastric the largest, whilst the contrary is the case in the mammiferæ; "as though the vegetative functions," says M. Beclard, "were to be less under the influence of the encephalon, in proportion as that organ is less submitted to instinct."

Scarpa divides the ganglia into simple or spinal, and into compound; Weber into ganglia of reinforcement, those of the spinal, and some of the cranial nerves; and ganglia of origin, those of the sympathetic, with which he ranks the orbitary and maxillary ganglia. Wutzer (De Corp. Human. Gangliorum Fab. &c. Berolini, 1817.) classes them as ganglia of the cerebral system of the spinal and of the vegetative or sympathetic system. M. Beclard arranges them, as ganglia of the spinal and cranial nerves; some, most numerous and most regular, belonging to nerves with double roots, others, placed in the course of nerves with a single root; and ganglia of the sympathetic nerves, some forming a double longitudinal series, and others approximated to the median line.

The ganglia are composed of two substances, one medullary or white, the other reddish grey. The medullary substance forms cords and filaments as in the nerves of motion and sensation. Contrary to a common opinion, the medullary filaments within the ganglia are visibly the continuation of the nerves entering them. The cœliac ganglion is the only one in which this continuation is not altogether manifest. The second substance of the ganglia establishes the distinction not only between them and nerves, but also between them and plexus. This substance has been much neglected; Scarpa (De Nerv. Gangliis et Plexubus Mutinæ. 1779.) considered it as serving only to separate or unite the nervous filaments; Haase (De Gang. Nerv. Lipsiæ, 1762.) to answer the same purposes as cellular tissue. Scarpa and Meckel supposed that it became fat in corpulent subjects, but Bichât, Wutzer, and M. Beclard, unite in contradicting the assertion.

M. Wutzer has made a series of comparative chemical experiments on the ganglia, and on mixtures of the white and grey substance of the brain and cerebellum. The results shew, that there is a real difference between them; the ganglia differing from the nerves, in having a greater proportion of gelatine, and still more from the encephalon by the excess of gelatine, by a greater quantity of albumen, and a smaller proportion of fatty matter.

The spinal ganglia have an oval form; they belong solely to the posterior roots of the nerves, the anterior roots being only

connected to them by loose cellular tissue. Haase was the first who made this observation, since confirmed by Scarpa and Prochaska. The medullary fasciculi entering the posterior extremity of the ganglion divide into three, four, or five, white filaments. They at first separate, but gradually approximate, and become intermixed, so that each cord issuing from the ganglion is formed of filaments arising from several of the cords entering it. The number, tenuity, and confusion of these filaments is not, however, very great; the spinal ganglia being, comparatively, of simple structure. The fasciculi thus issuing from the ganglion, after a course of barely two lines, unite intimately with those of the anterior root to form the common trunk of the spinal nerve, which does not itself proceed farther than one or two lines before it divides into an anterior and a posterior branch. The common trunk of the spinal nerve at a short distance from the ganglion, gives off a branch, often double, but rarely triple, which proceeds towards the neighbouring ganglion of the sympathetic trunk, and unites with it so as to form an intimate connection between the nerves of the spinal cord, the cord itself, and the sympathetic. It has been much disputed from which root the branch of communication comes. As Scarpa and Wutzer, so M. Beclard has found that the branch, whether single or double, comes from the common trunk, and when it can be traced, proceeds equally from each root. This branch, which at its origin is similar to the spinal nerves, when it has come within a line of the ganglion of the sympathetic, becomes red, and assumes the characters of that system. The ganglion of the fifth pair of cranial nerves, ganglion Gasserii, evidently belongs to the series of spinal ganglia, from which it differs only in form. The white nervous fasciculus passing under it, but not making part of it, and considered by Palletta as a distinct nerve, altogether resembles the anterior root of the spinal nerves. The ganglia of the nervous vagus and of the glosso-pharyngeal also resemble the spinal ganglia in form and texture. The trunk of the nervus vagus has a peculiar texture, differing from that of other nerves, but considerably resembling the trunk of the sympathetic.

The second sort of ganglia compose the sympathetic system, to which belong the ophthalmic, spheno-palatine and maxillary ganglia, the visceral ganglia, the coccygeal ganglion, the small anterior palatine, and some other variable ones.

The sympathetic nerve is a nervous ganglionic cord extending from the head to the pelvis, communicating with the spinal and trigeminus nerves, and giving numerous branches to the viscera. The upper extremity enters the cranium by the carotid canal

and cavernous sinus, where it forms a plexus, and often a ganglion of the carotid; it gives these filaments to the nerve of the sixth pair, and communicates with the lower filament of the vidian nerve; it sends off secondary plexus on the branches of the internal carotid, and may be traced to a little solitary ganglion placed on the anterior communicating artery of the brain.

Vertebral animals alone possess a sympathetic system of nerves. In fishes (Weber, Anat. Compar. Nervi. Symp. Lips. 1817.) the sympathetic nerve consists in a fine filament, with few if any ganglia. In reptiles it is more distinct; it unites the inter-vertebral nerves together, and enters the cranium with the nervus vagus. In birds it penetrates the cranium with the vagus and glosso-pharyngeal nerves; it communicates with the fifth and sixth pairs of cranial nerves; it presents an apparent interruption in the neck, which depends on its being contained within the vertebral canal; it is very distinct, and ganglionic in the thorax, and is prolonged to the caudal vertebræ.

In the mammiferæ the sympathetic nerve differs little from the human subject.

M. Lobstein (De Nervi Sympath. Human. Fabrica, Usu et Morbis. Paris, 1823.) has collected several various facts relative to the morbid changes of the ganglia and sympathetic nerves; he has remarked inflammation of the cœliac ganglia in cases of chronic nervous affections of the abdomen, in hooping cough and tetanus; he has also witnessed in different instances inflammation of the cardiac and pulmonary nerves. M. Autenrieth has likewise observed in hooping-cough, inflammation of the cardiac, pulmonary, and vagus nerves.

The last chapter of the book treats of accidental productions, including accidental humours, concretions, accidental structures, and animated foreign bodies, by which are meant intestinal worms and parasitic animals.

ART. VI. *Lectures on the General Structure of the Human Body, and on the Anatomy and Functions of the Skin; delivered before the Royal College of Surgeons in London, in the Courses for* 1823. By THOMAS CHEVALIER, F.R.S. &c. London, Longman and Co. 1823.

The profession are certainly considerably indebted to the liberality of Government, for the establishment of annual courses of lectures at the College of Surgeons, which it is al-

most superfluous to say was the condition of the arrangement by which the care of the Hunterian Museum was entrusted to that body, for the benefit and use of the public. We have no wish to find fault with the College, but it should be remembered that it was not until their want of activity had been stimulated by this stipulation, that the revival of the lectures on the foundation of Gale and Arris took place in its present form. The good effects of the change have been very obvious; to it we owe the published lectures of Sir E. Home, Mr. Abernethy, Messrs. Lawrence, Brodie, Wilson, and those now before us.

Our readers are aware that the appointment of Mr. Chevalier, was in consequence of the premature death of Mr. Wilson, a gentleman alike respectable as a professor, and estimable as a man. We will not flatter Mr. Chevalier so far as to assert that his course presents any thing very new, or very striking; it is rather a neat and compendious statement of some general and well known points. The observations on the skin of course form an exception. But in this judgment we wholly acquit him of blame in the choice of a subject, and can very well estimate the embarassment a lecturer must feel in the attempt to compress any extensive or minute information, into the very narrow limits allotted to him. We must therefore request our readers, to imagine that Mr. Chevalier has given a general view of the structure of the human frame, in a very precise, but correct style, and come at once to the subject of the structure and functions of the skin.

Proceeding from the external surface inwards, Mr. Chevalier remarks that the cuticle has hitherto been too slightly and superficially noticed by anatomical writers. It is one of the structures most generally diffused through organized nature, existing both in animals and vegetables. It is continued not only over the skin, as the term epidermis would denote, but over other parts accessible to the atmosphere, and presenting mucous surfaces. An exact knowledge of the peculiarities of its chemical composition is still wanting. Mr. Hatchett found it to consist principally of gelatine. It is well known that Sir H. Davy detected the presence of silex in the cuticle of vegetables, and from analogy Mr. Chevalier suggests that it may be worth while to examine whether it does not form a part of that of animals also. We fear that results of animal chemistry in general, are but little likely to throw light on the real nature or composition of parts subjected to its examination: those results are almost always more or less fallacious, and serve rather to show the combinations which follow the decomposition of organic structures, than to detect the real nature and mode of existence

of the elements by which they are constituted. Mr. Chevalier supposes that it is nourished by some vessels ramifying on the cutis, and appropriated chiefly to this purpose; if he had said produced, he would perhaps have been more correct, for we cannot bring ourselves to believe that any thing like real nutrition takes place in it, or that any vessels enter its structure. He has said in another part of the book that it is in a constant state of growth and decay, its exterior surface dying off in furfuraceous scales or patches; and this appears to be nearer the truth; the probability is that the loss from attrition and other causes on the external surface is compensated by a continued deposition of new matter from the vessels passing to it from the parts on which it is placed. The cuticle, or a structure resembling it, is deposited on the surface of healing wounds; it is however inferior for some time, and occasionally always, to the original: It often cracks and sooner dries; it is more liable to abrasion, and when destroyed is more slowly renewed. Mr. Chevalier is a supporter of the vitality of the cuticle, and has adduced some of its changes in disease as proofs; we cannot think them of sufficient weight to prove the point, and we do not know any alteration of the cuticle which may not be as easily, and as well explained by the affection of the parts which form it, and to which it is connected, as by the supposition that it possesses itself any vital powers.

The cuticle when minutely examined presents various appearances in different parts of the body, which are original and correspondent to the offices it is destined to perform in particular situations. On the ends of the fingers and toes, and on the ball of the thumb and under part of the heel, it presents a curvilinear appearance; whereas in other parts it is arranged in rugæ in various directions; longitudinal, transverse, and angular. It is well known that careful examination of the cuticle with glasses of high magnifying power has failed in detecting the existence of any pores in it; how then, comes the question, is the office of perspiration carried on? Pressed by this difficulty, Mr. Chevalier examined both the exterior and interior surface of the cuticle, with the microscope. In a portion of the membrane, magnified 140 times, he could not detect any pores, excepting those for the passage of the hairs: but instead, a number of minute velamina or fleecy shreds, presenting a follicular appearance, and separated from each other by bands of a thicker substance crossing and intersecting them. Mr. Chevalier supposes that the terminal vessels of the skin are lodged in these velamina, and transmit their secretions through them as long as the vital connection remains; but that when the vital union is

destroyed, the cuticle reduced to its merely chemical properties becomes incapable of continuing its transmissive office with any certainty or regularity. We are by no means certain that we clearly understand whether Mr. Chevalier means to assert that the whole substance of the cuticle, or merely its inner surface, presents the structure to which he has given the name of velaminous. If the latter, we cannot help thinking that his description is applicable to the fragments of the rete mucosum, or, as he calls it, internal epidermis, connecting the cuticle to the cutis. We are the rather inclined to adopt this idea from a reference to the 4th figure of his second stone-engraving; in this the external surface of a portion of cuticle from the thumb is represented, dried and magnified 140 times: to the greater part of it the rete mucosum is still connected, but is detached from one corner; now at this corner, what Mr. Chevalier calls the velaminous texture is much less distinct than elsewhere, and hence the inference we draw, that its appearance in any part of the cuticle is owing to the necessarily imperfect separation of the rete mucosum, and not to the actual existence of any such structure in the cuticle itself. The portions of cuticle thus represented, of which there are four, are with one exception from dried preparations, and admitting that the rete mucosum had not been completely removed from the inner surface, which we can hardly suppose it could, it is evident that under the microscope it could not be very easy to distinguish to which of the two structures the fleecy appearance was owing.

Mr. Chevalier applies the term interior epidermis to the structure commonly known as the rete mucosum; according to him it is neither a network, nor a mucous substance; it is more diffusible than mucous, and more easily washed away than either the cuticle or cutis. He has never succeeded in injecting it, even when he had filled the cutaneous vessels to the most perfect minuteness. The interior epidermis is more closely connected with the sebaceous glands than the cuticle, for after maceration they remain attached to the former. Mr. Chevalier states that all the vascular surface of the skin is minutely pencillated or villous, and that the villi of the lips and fingers, noticed by other anatomists, are parts of, and not exceptions to the general formation. This structure is supported underneath by a network composed of numerous vessels, and presenting frequent anastomoses. This network is supplied by larger vessels underneath, which, at various angles, permeate the corium, after having partially ramified under it. In connection with the vessels, and circulation in the surface of the skin, Mr. Chevalier suggests as probable, that the rete muco-

sum, or interior epidermis, as he terms it, may be a widely diffused perspiratory gland, and the medium of conveying from the vascular structure of the skin the fluid of transpiration, (page 164.) But he has already stated (page 148.), that he has never succeeded in injecting the rete mucosum, and we find some difficulty in comprehending how a secretion so copious should be supplied by a part not possessing any apparent vessels. The glandular, or more properly speaking, the secreting apparatus, here doubtless consists in the vascular surface of the corium; but by what means the secretion is carried through the rete mucosum and cuticle, is more than we pretend to explain.

Of the papillæ, we are told (page 170.), that they appear to arise from filaments of the cutaneous nerves, which perforate the corium from within; but is this really the case? we believe not; and that the existence of nervous papillæ in the skin is one of many points taken for granted, rather than proved by anatomical inquiry. A good modern physiologist says—"On ignore complétement la maniere, dont les nerfs se terminent dans la peau; tout ce qui a été dit des papilles nerveuses cutanés est purement hypothétique." Magendie Precis. Elem. Vol. I. p. 131. We hardly expected this oversight from Mr. Chevalier after being told, "that much that has been written and delineated, respecting them (the papillæ), is very confused, one might almost say imaginary, or perhaps has arisen from optical deception, in examination with incorrect glasses." Page 170.

Though so minute as to be with difficulty distinguishable in a natural state, yet from their enlargement in disease, and from analogy, Mr. Chevalier believes that the papillæ have generally a conical form. The supposition, that by its passage through the corium, each papillæ derives a degree of solidity, and a delicate involucrum, which determines its form, and secures its competence to its uses (page 171.), is wholly gratuitous, and unsupported by proof; do the papillæ really perforate or pass through the corium, as Mr. Chevalier assumes? or is it not rather a production from its surface?

According to our author, the pores distinguishable in the true skin are of three kinds; first, the residences of the bulbs of the hairs; secondly, those of the capilluli, or down; and lastly, those of the sebaceous glands. Of the sebaceous glands, he asserts, that there are two sets: one is well known, and is situated behind the interior epidermis, imbedded in the corium. The other, which he supposes not to have been before detected,

are very minute, and lie between the second epidermis and the cuticle, to which they appear firmly attached. He found them on examining the inner surface of some cuticle which had been macerated for *more than six weeks*, and from which the interior epidermis, having been broken down by putrefaction, was readily washed or rubbed off. Page 184.

Both the longer hairs and the capilluli grow from small bulbs, imbedded in the corium, where they are supplied by vessels from the reticulated plexus, devoted to their nourishment. Hence they pass through the interior and exterior epidermis, at acute angles, closely embraced by both, especially by the latter, which sheaths their protrusion so firmly as not to allow them easily to be detached, even after a length of maceration and putrefaction, which has been sufficient to destroy the interior epidermis. Hence, as Mr. Chevalier correctly infers, the capillary perforations cannot possibly be perspiratory, the obliquity of their course, and their firm adhesions, presenting an insurmountable obstacle to the transmission of any thing through them in their natural state.

We cannot discover that Mr. Chevalier has thrown any light on the functions of the skin; on the contrary, he has scarcely touched upon the subject; and instead of entering into a detailed examination of the many disputed points it presents, has confined himself to a few general indications of common place notoriety. The experiments of Mr. Abernethy, to which he has alluded, are highly interesting, and may afford material assistance to future investigators of these matters; but we are surprised that Mr. Chevalier should have forgotten to notice the conclusions of others, who have since turned their attention to the offices of the skin.

Mr. Chevalier terminates his lectures by an address, which he has published at the solicitation of several of his friends, both in and out of the College. Its object is to excite the profession to sympathize with that body on the failure of the application made by it to Parliament, several years ago, for some power to control unauthorised practitioners. Ardently as we desire to promote every thing which may tend to raise the character, and ensure the respectability of the profession, we look with some degree of uneasiness on the endeavours of the College of Surgeons to obtain the powers to which they aspire. At least we hope, that as a previous step to any legislative enactment, a fair examination into the deficiencies of which they complain may be instituted, as a measure equally calculated to serve the interest of the public, and the profession in general. In spite of

the assertions of Mr. Chevalier, we cannot bring ourselves to believe the College of Surgeons actuated solely by public motives. Without making any unfair reflections on those who govern that body, than which nothing can be farther from our intention, it is impossible to forget that, in their corporate capacity, they derive a considerable revenue from the examination of candidates for diplomas; and that individually, a very great proportion of them receive large fees from students as Hospital pupils. With these facts before our eyes, it is too much to suppose that they should be altogether uninfluenced by personal considerations, in desiring the success of an arrangement which would add much to their profits, by rendering the acquirement of a diploma, and an attendance on the surgical practice of the metropolitan hospitals compulsory, instead of being as heretofore a matter of choice. We hope not to be misunderstood: we would wish to see every general practitioner a properly qualified member of the College of Surgeons; but we cannot at all comprehend the manner in which large sums given to hospital surgeons, and to the College for a diploma, tend to ensure the safety of the public, or the true interests of the profession, in a greater degree than those of a more moderate amount. In a word, let the extent of knowledge required for obtaining a diploma be as great as possible, greater far we could wish than the quantum stipulated for in the College examinations; let every difficulty be thrown in the way of the admission of the negligent and ignorant student; but let us cease to hear of a system which appears to measure the candidate's merits by the length of his purse.

ART. VII. *Transactions of the Associated Apothecaries and Surgeon-Apothecaries.* Vol. I. 8vo. pp. 640. Burgess and Hill, London, 1823.

We hail this as the forerunner of a series of volumes, which may, and should, form a very valuable collection of practical papers on the various branches of medical science. The countless opportunities of the members of the Association, who form a very large proportion of the active practitioners in this country, afford a field of observation of unlimited extent and usefulness. That a series of periodical volumes like the present, is in progress, will, we conceive, act as a powerful stimulus upon many

members of the association, who, but for that circumstance, might never commit their observations to paper, and if so, might never have the confidence, nor take the trouble to publish them. The successful sale of the volume would, from the same circumstance, be greatly increased, as every author who had a paper in it, must have a circle of friends that would be desirous of seeing his communication. As to this point, we may remark, that the present volume is very deficient in variety, the greater portion of it being furnished by Mr. Haden and Mr. Alcock. We speak not so much of the value of the papers of these two very meritorious contributors, as of the injury which the want of variety must do to the circulation of the work, particularly as the very contrary might have been expected from so numerous an association. This is of more importance than the members may perhaps be aware of; for the limited sale of the work (and from this cause, independent of others, we are convinced it will be limited), will throw a damp on their subsequent exertions, which it will be difficult we fear to remove. We proceed to the volume itself.

The first is an introductory essay, or rather history, drawn up by Mr. Haden, containing an account of the origin of the association, with documents of little general interest, relating to the Apothecaries' Act and its defects, and also a sketch of the present state of medicine in this country, with suggestions for its improvement. The writer of the article we observe, quotes, *with approbation*, a paper of some friend we have reason to believe, in the Intelligencer which contains very objectionable eulogiums on French medicine. In particular he says with a sneer, "we saw the other day the recent French publication on Arachnitis, lying uncut on the library table of one of the greatest medical societies in London. It had lain there unnoticed for some months." Now this work on Arachnitis, here held up to praise, is in many parts a gross burlesque on medical science; and the members of the medical society showed their good sense in not spending their time in perusing prescriptions of barley water or bark, for violent inflammation, or minute descriptions of the symptoms of diseases, of which the authors candidly confess they had never seen nor heard of a single case! We confess we see no point, therefore, in his sneer, "with such facts before us, we may easily divine what the principles of practice are, which *English* medical men carry to the bed-side;" and we prefer in every view the good sense of English practice to the systematic absurdities and visionary pathology of France. But as we cannot spend time on the subject, we refer our readers for a true picture of French practice and morbid dissection,

to the first article in the 15th Number of the Medico-Chirurgical Review. It is to be regretted, that there is one medical man in this country who would advocate such systems, which are only calculated for the meridian of Paris. The Associated Apothecaries are welcome to praise them if they will; it will only afford an illustration of the very objectionable remark in the next page, that "theory is but another word for truth." We marvel indeed, how the association give their countenance to the promulgation of such doctrines. We never in our reading encountered anything more Utopian than what follows on the study of pathological anatomy. The association actually anticipate the probability of anatomy arriving at the ultimate structure of organs, and determining mechanically the action of medicines, &c., upon them! (p. cxxv.) The essay concludes with the hope that, Apothecaries and Surgeon-apothecaries, "will support the present literary undertaking by transmitting the results of investigations made according to the above principles." We sincerely, for their own success and respectability, hope not. "The field," continues the writer, "is a new one in this country," and we may add, that it is not likely to be extensively tilled, as it is in no manner suited to the intelligent followers of Sydenham, Heberden, Hunter, Cooper, and Abernethy.

On the Education and Duties of the General Practitioner. By T. Alcock.—Along with many very excellent directions and useful precepts, there prevails throughout this clever essay a strong colouring of similar Utopianism to that we have just exposed. Mr. Alcock has laid down a standard of exertion and of attainment both for masters and apprentices, or pupils, which it is humanly impossible to equal, or in most cases to come near. We think that this was far from judicious; in the first place, because the ingenious and enterprising scarcely want a stimulus of this kind; and in the second, it must do great injury to more humble and common place students, by causing them to despair of coming near the standard laid down. With these cautions we think, Mr. Alcock's essay may be perused with great advantage both by masters and pupils. We shall only quote his distribution of the time of a medical student in London for the two first seasons.

"The time may be stated as *at least* four hours per day, six days in the week.

For the study of the bones, before the commencement of dissection	four weeks.
For the muscles, ligaments, and joints, allowing a fortnight for the head and neck and the same for each extremity	six weeks.
For the injected arteries	six weeks.

For the small subject for nerves..... two weeks.
For the injected head and neck..... two weeks.
For the full dissections, without injection, allowing three weeks to each division, as above. } nine weeks.

Total, twenty-nine weeks, leaving three weeks for the dissection of the internal viscera, the organs of sense, &c. *

The day work will stand,

For practical dissection, and making studies from dissected parts. } four hours.
For attendance on anatomical demonstration..... 1 hour.
For anatomical lecture..... 1½ hours.
For reading, arranging tables, &c..... 1½ hours.

9

Total, nine hours, exclusive of lecture on natural philosophy, one hour twice a week.

For the second Season.

Chemistry,—one hour thrice a week.
Botany, and materia medica,—ditto.
Theory and practice of physic,—ditto.
Practical and pathological dissection,—one hour daily.
Anatomical lectures,—one hour and a half daily.
Medical hospital practice,—one hour daily.
Surgical hospital practice,—one hour daily.
Surgical lecture,—one hour, twice or thrice a week.

Total, four lectures thrice a week = 2 hours daily.

Anatomy,

Dissection..... 1 hour.
Lecture..... 1½ hour.
=2½ hours.

Hospital.

Medical practice..... 1 hour.
Surgical practice..... 1 hour.
=2 hours.

6½

Remain for reading, writing, meditation, &c..... } 2½

Total of intellectual labour 9 hours.

Case of Chronic Inflammation of the Pericardium, &c. By Dr. J. Johnson.—Mr. Bewley, a dentist, had been considered phthisical for some time, before his death, having dry cough,

* "To the student who has learned dispatch by perfectly understanding his work, this time will afford ample leisure for drawing and modelling from the dissected parts. The idler, who has learned nothing perfectly, will perhaps think it far too little. The faithful student will find it more than enough."

feverishness, and becoming emaciated. Thoracic inflammation was succeeded by metastasis to the joints, and subsequently by paralysis of the right side, and apoplexy, which ultimately proved fatal. On dissection it was found that

"The vessels of the head were gorged with blood, and there was some effusion between the tunica arachnoidea and pia mater. In making the incision for the centrum ovale, we came to a rent in the *right* posterior lobe of the cerebrum, containing a clot of blood of about an ounce. The laceration communicated with the lateral ventricle of that side, which was filled with blood, as also the other lateral ventricle, the third, and the fourth ventricles."

In the chest, the lungs might be pronounced sound. There were adhesions between the pleura costalis and pleura pulmonalis of the right side, and an effusion of a few ounces of serum in the left cavity of the chest. The pericardium and parietes of the heart were so completely accreted together by chronic inflammation, that the scalpel could not separate them without cutting one or other structure. There was no other organic lesion to be seen."

Case of Spontaneous Rupture of the Uterus in the seventh month of Pregnancy. By Mr. Shillito, of Putney.—This is a very valuable case, as it serves so far as a single case can go to decide the discrepancy of opinion, concerning the propriety of delivering the patient in those cases artificially or of leaving them to nature. Dr. Denman and Mr. John Burns, advocate the latter; Dr. Dewes, of Philadelphia, the former. Mr. Shillito's patient,—in contradiction to the opinion of Dr. Dewes, that fatal effects will result from the fœtus escaping into the cavity of the peritoneum,—entirely recovered from the immediate effects of the rupture; and it is probable he thinks, that the recovery would have been eventually complete, if her powers had not given way under the irritation of the new process which had been set up by nature for the delivery of the child.

Cases, in which certain kinds of food seemed to act as violent narcotic poisons. By Mr. Haden.—The pulp of orange, roasted pork, pickled pork, with greens, beef's heart, and mutton chop, are the articles of food which Mr. Haden thinks produced poisonous effects. We do not think that Mr. Haden is borne out in his deductions from these cases; for example, his poisoning by mutton chop, which occurred in a weakly infant, a year and a half old, who "ate his dinner of mutton chop, and was placed in his chair immediately afterwards. His brother came on him in a hurry, and made him start. He instantly turned pale, his eyes became fixed, and his face lead-coloured; and he fell into a fit, but he was not convulsed." Sal volatile and an emetic were given, the operation of which restored him

to sense and warmth. He was by another practitioner cupped, and two ounces of blood taken. Next day he was quite well. And this, forsooth, is a case of poisoning by mutton chop? Does Mr. Haden allow no influence to the start? In our opinion, it accounts for the whole, or nearly the whole of the symptoms.

Belladonna applied externally for nervous pains. By Mr. Rood, of Hampstead.—We consider this as a very important communication, if Mr. Rodd's experiments prove as successful in the hands of others as in his own; for it appears that the most violent neuralgia may thus be alleviated.

"From observing the powerful influence of this extract in apparently paralysing the iris, I conceived it probable that violent pain in the nerves might possibly be lessened by applying a strong solution over the skin covering their source, and the event has fortunately answered my expectation. The first case which occurred, arose from external injury. A poor woman, in descending a flight of steps, fell, and struck forcibly the back part of her thigh against one of them. She felt excessive pain at the time, which, however, shortly after subsided, and again returned, with equal violence, at longer or shorter intervals, as she was much exposed to the weather. The case was looked upon as rheumatic, and treated by the gentleman in attendance by a variety of means, but without success. Being at last worn down with pain, she kept her bed, despairing of relief. A period of seven months had elapsed since the attack, when I was first requested to see her. She was much reduced by continual pain and want of rest; and I confess, at the first view of the case, I had little hope of relieving her; I found the limb tender to the touch, somewhat shrunk, but free from redness, or other appearance of inflammation; the pain extended through the whole course of the sciatic nerve, along the thigh and leg: it was agonizing in degree, sudden in its attack, and equally quick in its termination, exciting almost a poetic description in her uneducated mind. She had no fever, nor other appearance of disease than great emaciation. I ordered two drams of extract. belladonnæ in one ounce of water, to be freely smeared over the whole surface in pain, and the woman almost immediately expressed herself relieved: she passed a comfortable night, which had scarcely been the case since the beginning of the attack. I kept up the effect by repeating it in the morning, and again in the evening, and she had no recurrence of pain. I omitted it on the following day, and pain returned, but not so violent; I therefore ordered it to be repeated, but at longer intervals; and as a disposition to diseased action continued, I gave her the following pills: ℞. Ext. belladonnæ gr. ¼. Ex. Cinchonæ gr. ijss. Ft. Pil. sextis horis sumenda: gradually increasing the dose till some marked effect of the belladonna was produced. There was no return of violent pain from the first day; but as a stiffness remained, I ordered a blister high up on the back part of the thigh, which was kept open for a short time: she re-

covered sufficiently in a fortnight to move about, when she soon regained her strength. Two years have now elapsed, and she has been quite free from relapse."

Case of poisoning by Opium, treated by mechanical means. By Mr. Evans, of Belper.—A woman, aged 55, lame for eight or ten years, with pains about the loins, with lower extremities almost paralytic, had been in the habit of taking from 30 to 40 drops of laudanum in gin, to ease the pains when violent. One day, it appears, she had taken ʒjss of tincture of opium, in half a pint of gin, which produced all the symptoms of approaching death. Mr. Evans introduced into her stomach a flexible tube, strengthened with a strong iron; and though his fingers were as low down in the fauces as possible, there was no irritation, as all feeling seemed to be gone.

"As soon as the tube was introduced ʒss of ipecacuanha mixed with ʒij of water was thrown into the stomach by means of a syringe. After waiting for about ten minutes, and finding that the emetic produced no effect, as the symptoms became progressively worse, the countenance putting on a darker hue, the pulse becoming more feeble, and the breathing more laborious, I injected, as soon as possible, about three pints of warm water into the stomach. The patient was much emaciated, so that the stomach was easily felt distended with the fluid, and by gentle pressure its contents were as easily emptied through the tube. They were strongly impregnated by the odour of the gin and opium.

After alternately filling and emptying the stomach in this manner for about an hour, the odour of opium gradually ceased*. A scruple of pulv. ipecac. and a grain of tart. emet. in ʒij of water were then injected and left in the stomach: a cathartic enema was also administered.

Whilst the operation of filling and emptying the stomach was going on, it was gratifying to observe the change which took place for the better—the countenance gradually lost its mottled appearance, the breathing became more free, the lips regained their natural tint, and the pulseb ecame slower and more regular; so that when I left her, at the expiration of two hours, she seemed to be in a quiet and calm sleep."

"On the 7th, the symptoms were very favourable, excepting that the bladder was in a state of paralysis; on which account the catheter was used every twelve hours until the 12th.

On the 8th, a pain in the side, with difficulty of breathing and a violent cough commenced, which continued to increase notwithstanding very active means were used to check it; and on the 12th

* "I am not aware that this treatment was ever put in practice before. If I should be called to a similar case, instead of pressing upon the stomach to empty it, I should endeavour to withdraw the contents by an exhausting syringe adapted to the mouth of the tube."

she died, apparently from inflammation of the lungs. I was not permitted to open the body."

On Venous Congestion. By Mr. SANDWITH, of Beverly.—The motto to this paper, taken from Dr. Armstrong, will show the direction of the author's views. "The attention of the medical public," says Dr. Armstrong, "has been too exclusively directed to the phenomena of the arterial system; but it is to the *venous system* all must look for the foundations of many important diseases." Mr. Sandwith, after giving several cases and remarks, in illustration of the influence of venous congestion in producing apoplexy, mania, epilepsy, delirium tremens, angina, pleuritis, &c., concludes thus—

"It is an indirect proof of the soundness of pathological speculations, when they square with the established methods of cure. The fatal examples of Cullen and Brown should deter us from deviations in practice on theoretical grounds.

"We have remarked that the remora occasioned by venous congestion of the larger organs, as the brain and liver, gives rise to an increased action of the arteries; and hence it is that this condition of the organ is in no long time complicated with inflammation. Indeed, a state of venous congestion precedes and alternates with all pyrexial diseases, and is characterized by coldness, paleness, and shiverings. It is called by nosologists the cold stage, to distinguish it from the reaction which ensues. It is worthy of remark, that sometimes, from constitutional debility, the stage of reaction is never established; and the patient dies with all the symptoms of venous congestion. In typhus and scarlatina this is not uncommon.—In hot climates, it is in this primary stage, and this only, that remedies are availing in fevers and inflammations. During this short prelude to the storm, copious blood-letting, the warm bath, &c., moderate the reaction, and the violent efforts of the heart and arteries to restore the equilibrium of the system; otherwise the squall, as Dr. Rush emphatically calls it, lays the system prostrate, and disorganizes some of the vital organs. On this principle, then, the necessity of blood-letting in venous congestions of the graver kinds is obvious. At the same time, such is the state of what we will call debility, for want of a better term, that unless cordials are previously administered, and the patient put into a warm bath, a sufficiency of blood cannot be abstracted. In this climate in such diseases a succession of smaller bleedings is safer than one full evacuation by the lancet. In all the cases which have occurred to me, every succeeding venesection has been borne better, and has been larger than the one that preceded it; accurately noting in the phraseology of pathologists, the decrease of debility, but in correcter language, the diminished oppression of the venous system.

"Although in the minor forms of venous congestion, cordials are sufficient for their removal, in the graver forms they are quite

inadequate. The lever is not long enough to lift the load, and it cannot be lengthened, inasmuch as stimulants excite only in certain quantities; beyond this limit they act as debilitants. In the illustration of the lever and the load to be removed, if we cannot lengthen the one, we must lighten the other; so in these diseases our only resource is to relieve the oppression of the veins by a careful abstraction of a portion of their contents.

"In cases of venous congestion, the extreme vessels, the exhalants, as they are called, are in an atonic state, and hence it is that the skin is supple, and bedewed with a clammy sweat, the stomach nauseated with vitiated secretions; that there is often watery diarrhœa, and always an excessive flow of pale urine. Even the secretion of the liver is changed, and sometimes the effect upon the salivary glands produces a salivation. The indications arising from these symptoms are obvious: the warm bath; frictions of the surface; purgatives; mercury sometimes, and medicines which tranquillize the stomach, complete the catalogue of remedies for venous congestion."

On the Colchicum Autumnale. By Dr. Wallis, of Bristol.—Dr. Wallis used the powder of colchicum in preference to the other preparations of it. We should, on the contrary, prefer the tincture of the flowers, both as the most certain and the least violent. After some commonplaces on theory, practice, and empiricism, the author goes on with his cases, the first being one of rheumatic gout in which he gave the following powder every four hours.

℞ Pulv. Colchici. gr. vi. j.
—— Doveri gr. V.
Sulph. potassæ ʒj, Ft. Pulv.

It acted as a charm, and the recovery of the patient was astonishingly rapid.

Next follow cases of hysteritis, deep-seated inflammation of the lungs, pleuritis, phthisis, incipient hydrocephalus, and diabetes, in all which the pulvus colchici was successfully given, in conjunction with other remedies. It appears to us that Dr. Wallis has not given a fair measure of credit to the auxillaries, Dover's powder, calomel, ipecacuan, tartar emetic, turpentine, opium, and other strong remedies, which he failed not to exhibit along with the powder of meadow saffron.

On Lameness, from sinking of the arch of the foot. By Mr. T. Haden, of Derby.—This affection is by no means unfrequent, and Mr. Haden seems to have been successful in his treatment.

"Support is conveniently and perfectly given by means of a compress placed under the arch of the foot. In the treatment of many cases this plan has invariably answered the intended purpose: but the mode of applying it is not immaterial. Compresses of va-

rious kinds were tried; such as balls of canvass stuffed with curled horse-hair, leather, and linen and woollen balls also, and compresses of various shapes, besides frames made of tin and stuffed in a similar way; but nothing answered so well as broad strips of adhesive plaister rolled over each other, so as to form a compress of the proper width and thickness, and bound on the foot by means of other strips of plaister; the whole being fastened on and kept tight by the application of a roller, or what is better, a laced stocking or ankle-piece.

"A compress, thus put on, will not give pain if it be made flat enough at first: indeed, in the course of a day or two, it becomes a great comfort to the wearer. It should be changed once a week, and the compress may then be enlarged. This may be done very conveniently by rolling the strip of plaister which was used to keep the compress in its place, on the old compress itself, and the increase of size thus given will generally be found to be the proper one for the time. The advantage of this form of compress arises from the beat of the limb moulding the compress to the exact shape of the foot, and yet its being sufficiently firm to bear any necessary degree of pressure from the body.

"It is unnecessary to say that the foot should on no account be permitted to bear the weight of the body during the cure, without the compress being on; for it is evident that one indiscretion of this kind will be sufficient to destroy the fruits of a month's care."

On Fracture of the Patella. By Mr. R. P. Moggridge, of Ashburton. The author describes an improved apparatus for treating those unmanageable fractures, but we could not make it sufficiently intelligible, without a plate. Mr. Moggridge has also improved the common tooth instrument, so as to prevent injury to the gum by its pressure.

On Fracture of the Patella and Olecranon. By Mr. Alcock. The author is quite confident that in all such fractures, if properly treated, there will be produced either ossific or strong ligamentous union. In fractured patella, he says,

"The apparatus may be very simple: the writer has generally used strips of plaister of about an inch in breadth, and a foot long, crossing obliquely from the integuments immediately above the patella to the upper and back part of the leg, the patella being within the angle formed by the crossing. This he has believed, rendered the bandage and compress less liable to slip, but he does not consider the plaister essential. A moderate sized compress has been then placed immediately above the patella, the ends bending downwards on each side, so that the bandage has rested upon it, and has produced an equable and steady, though moderate compression, in a direction opposite to that of the extensor muscles; thereby counteracting any contraction, which under the previously detailed circumstances they may be likely to exert. A narrow, double-

headed flannel bandage has been generally preferred, on account of its greater elasticity than linen or calico. A splint may or may not be placed in the ham. If the steadiness of the patient can be depended upon, the splint may be dispensed with ;—if his steadiness be doubtful, the splint had better be used. There is an advantage in leaving the patella uncovered, as it enables the surgeon not merely to suppose that the ends of the bone are steadily supported in contact, but to assure himself of the fact, day by day, without disturbing the apparatus ; unless any slipping of the bandage or slight retraction of the upper portion of the bone should render it necessary."

He is also very particular in his directions for the medical treatment both local and general. He concludes with some very just remarks on his favourite subject of medical education.

On the utility of Opium in certain Inflammatory Disorders. By Dr. ARMSTRONG.—The author of this paper is undoubtedly one of the most philosophic and eloquent of living writers on medicine. His observations are in general not only accurate, minute, and satisfactory, but embrace a wide range of deduction, and a clear scientific embodying of his conclusions in language, at once expressive and classical. As this subject is now well understood however, we shall content ourselves with a single quotation.

" In acute inflammation of the peritoneal coat of the stomach or bowels, and in what are termed acute peritonitis and hysteritis, I always make a point of seeing the patient bled, in the first stage, to complete relaxation, to approaching syncope, whatever may be the quantity of blood necessary to produce that effect ; for it is to the effect, and not to the quantity, which we must look for relief in such formidable cases. As soon as ever the patient recovers from the faintness, three grains, at least, of good opium, in the form of a *soft* pill, are given, and quietness is strictly enjoined, that, if possible, sleep may be obtained. In some instances I have ordered a less quantity of the opium in the solid form, but have added sufficient of the tincture to make the dose equal. This method is preferable in highly irritable habits, because the sedative influence of the opium is thus more speedily procured. The effects of opium thus administered, are to prevent a subsequent increase in the force or frequency of the heart's action, and a return of the abdominal pain, while it induces a tendency to quiet sleep, and a copious perspiration over the whole surface. In many instances, this simple procedure will remove the inflammation at once, nothing being afterwards necessary when the patient awakes, but spare diet, absolute rest and quietness, with an occasional mild laxative. But on all occasions, if possible, I visit the patient three or four hours after the administration of the opium, and if there be pain on pressure in any part of the abdomen, with a hot skin, and quick, jerky pulse, I order the

patient, in my presence, to be promptly bled again in the same decisive manner as before. Some physicians commit a great, a fatal mistake in the treatment of acute inflammations, by dictating on paper, that a certain, a determinate quantity of blood must be taken away, and then they walk about their business, as if all were done that ought to have been done. What an absurdity, what a strange violation of duty, does this conduct involve! In the first place, a great deal of time is commonly thus lost, which is so precious in all acute inflammations; in the second, the determinate quantity of blood, set automatically down, may have no effect in removing the inflammation; and I repeat, it is solely upon the *effect* produced that the benefit of blood-letting depends, and therefore the effect should always be witnessed by the physician. It is the only safe guide. After this second abstraction of blood, carried again to complete relaxation, I generally prescribe about two grains of opium with three or four grains of calomel, exhibited in the form of pill, as the faintness disappears. The patient is again left in perfect quietness, and refreshing sleep, with free perspiration, most frequently succeeds. A third venesection is rarely requisite, but if, after the expiration of five or six hours from the second, pain and fever still exist, the operation should again be performed as before, and one grain of opium with two or three grains of calomel given almost immediately afterwards; while half a grain of the former, with two grains of the latter, may be repeated every four hours till sleep and general perspiration be induced. It is repeatedly observed in my works, and the observation was made long before their appearance, that the specific effects of mercury are easily procured when large quantities of blood are abstracted under its administration. For this reason, the calomel should be given with proportionate care, whenever copious and repeated blood-letting becomes necessary."

Cure of cut-throat successfully treated. By Mr. HADEN, of Sloane-street.—In this case Mr. Haden very judiciously delayed dressing the wound, not only till he had freed it from all coagulated blood, but till the irritation, both constitutional and local, had somewhat subsided. He says,

"It is impossible not to remark again and again on the difference of appearance between the wound and the other symptoms, immediately after the accident, and after a lapse of two hours. At first it was red, and as if swelled out; its appearance was angry, or almost as it were fiery, and it heaved up and down on account of the violent pulsation of the surrounding arteries. In two hours every thing had, on the contrary, become calm; the wound was pale and flaccid, all its angry appearance had subsided, and the pulsation had entirely ceased. In like manner it can scarcely be conceived how much the cough and gluey sputa, and the other symptoms of irritation, had subsided at the second period.

"Probably none of these advantages would have been obtained,

if the wound had been immediately closed. Neither would the ulterior ones, of a chance of a more extensive union by the first intention, and a more certain avoidance of secondary fever, have been attained."

There are a few other cases, such as a common case of poisoning by opium, by Mr. Hayes; a paper written in his usual bad style, by Dr. Uwins, giving a case of aphonia, in which nitrate of silver and galvanism were effectual; cases of blighted ova, by Messrs. Hayes and Powel; a case of congenital division of the palate, by Mr. Alcock, in which he successfully performed the operation of staphyloraphia; and a memoir of the late Mr. Morel, of the Westminster hospital, by his colleague, in which we find the following disgraceful paragraph—disgraceful, because its allusions cannot be mistaken:

"He held in abhorrence that disgusting popularity which ignorance too generally yields to bragging merciless operators. He shuddered at that frightful career in which vulgar fame and greediness are maintained by unnecessary and destructive operations. His meekness enabled him to hear with silent regret the boastings and puffings of these desperadoes, while he might have quoted fatal instances of their temerity."

We marvel how such papers escaped castigation and rejection by the Editorial council.

Art. VIII. *A Treatise on Practical Cupping, comprising an Historical Relation of the Operation through ancient and modern Times, with a copious and minute Description of the several Methods of performing it; intended for the Instruction of the Medical Student, and of Practitioners in general.* By Samuel Bayfield. With plates. pp. 176. 8vo. Cox, London, 1823. Price 5s. boards.

We agree with the author of this neat little treatise, as to the great importance of the subject of cupping; and we are extremely sorry to add, that as an operation, it is seldom if ever performed, out of London, with the dexterity or dispatch which the pain it occasions so imperatively require. In Dublin, for example, more than one of the most eminent surgeons perform it most clumsily and painfully, while they could go through all the minutiæ of the most complicated operation for hernia, lithotomy, or amputation, without faultering. In Scotland, the operation is almost unknown; and as for meeting with any body there who could perform it well, we should imagine it a

very uncommon circumstance indeed. We do not, however, expect that a treatise like the present is likely to teach the art, so much as call attention to it. Practice is indispensable to dexterity; but the principles necessary to practical success are here most circumstantially given, and those who are anxious to become *au fait* in the operation, would do well to make themselves masters of the principles, an abstract of which we shall now take the liberty of laying before them; but before doing so, it may not be amiss to give one or two instances of the ruder forms in which the operation is or has been practised, that the contrast may appear the greater with the skilful method of the metropolitan cuppers by profession.

"Among the Egyptians the patient's leg being first girted tightly by a ligature tied below the knee, was plunged into warm water, and afterwards beaten with a stick until considerable swelling ensued, when the scarifications were made." Among the French, I am told, this mode of scarification, is still used."

Cupping in Shetland.—"Dr. Copland, in his inaugural dissertation on rheumatism, published at Edinburgh, in 1815, describes a curious method of cupping, as performed by the natives of the island of Zetland, as follows:—'When they wish to scarify a part, they foment it with warm water. To the parts of the skin, the physician gives six or seven cuts with a knife or razor, and wounds very gently. A ram's horn (slightly curved, and bored through by degrees with a sharp instrument, the top part being cut off, and the horn encompassed with a soft hide) is applied instead of a cupping-glass. The lip is placed on the hole, and as much of the inclosed air as can be, is sucked out. When the horn is exhausted, the hide is twisted round it, and the tongue thrust into the hole to prevent the air forcing in, after that, the horn lays hold of the scarified part, and the cloths being dried a little from the warm water, are laid around the bottom of the horn to excite the blood to the part. When it is half full of blood, the horn then leaves, and causes the skin to fall. The same process is repeated again and again, until a sufficient quantity of blood is taken."

We think it of interest, as a stimulus to country practitioners, to give from Mr. Bayfield two instances in which ignorance of the art of cupping produced great embarrasment and unpleasant feelings.

"A lady, who very frequently requires to be cupped, left London some time since on a visit into the country, and during her absence feeling herself obliged to have recourse to the loss of blood, sent for the surgeon of the place, who immediately attended. The lady informed him that having a recurrence of certain symptoms, from which she was usually relieved by cupping, she had sent for him to perform the operation. The surgeon excused himself on account

of "*not being in the habit of cupping*;" but requested that *his father* might be allowed to officiate for him. His desire was complied with; but the senior gentleman, probably from having been but little practised in the operation, was very much embarrassed in its performance; and having spent nearly an hour in unavailing attempts (which exceedingly annoyed his patient, and drew from her complaints and remarks that harassed his feelings and increased his confusion) his perseverance became exhausted, and he was obliged to relinquish the fruitless effort, having obtained about *two* ounces of blood.

"The remarks of the patient were of such a disagreeable nature to this gentleman, that his son (who favoured me with these particulars) conceived there was an imperious necessity for taking some measure to prevent the occurrence of such circumstances in future, and he determined therefore to qualify himself properly in the art of cupping—to effect which, he immediately came up to London, a distance from his residence of 175 miles, and placed himself under my instruction.

"A medical gentleman, formerly resident in an adjoining county, communicated to me the following candid avowal, with an unlimited power to dispose of it at my own discretion.

"He was in attendance upon a gentleman in the country who had been seized with apoplexy, when the physician summoned to meet him in consultation directed twenty ounces of blood to be drawn from the back of the neck by cupping. He was sensible that his success in this operation must depend upon chance rather than ability, as he had, like many others, neglected to qualify himself in it. He would gladly have dispensed with the operating duty; but no alternative was left him. The patient's family and friends were so anxiously interested in his recovery, that they would, in consideration for no one, have allowed an omission of any means that offered a chance of benefit. As a surgeon, to have acknowledged himself incompetent to meet all the contingencies of his profession, he must have been betrayed into serious consequences—for the relatives of the patient were well-informed persons, and would have concluded that a medical man with *one* defect, might possess *more;* and as they very properly estimated the value of a surgeon in the ratio of his abilities, he would inevitably have been discharged had he evinced an incapability in any of the branches of his profession. They were, also, persons possessing considerable influence in that part of the country, and an unfavourable opinion, or disapprobation of him, would irreparably have injured his character and interest. In such a dilemma, he commenced the operation under very unpleasant emotions of mind, and the almost empty state of his cupping-glasses soon informed him, that his apprehensions were unfortunately but too well founded. The anxiety of a parent for the welfare of his family now predominated over every other sentiment, and induced him to resort to an expedient that, otherwise, his honourable mind would have disdained. By soaking

the sponge in water, and squeezing its contents into the cups (which he concealed from the persons in the room by the covering of a napkin), as he removed them, he *apparently* succeeded in obtaining the quantity of blood required; and as he was discreet enough to throw away this mixed fluid of blood and water, immediately the operation was completed, no suspicion was entertained of the deception, the by-standers' attention having been more directed to the patient than to the appearance of the blood. The sick man recovered; and a full share of the credit of the cure fell to the operation and to the surgeon! Though this was a conclusion more fortunate than the most sanguine hopes could have reasonably anticipated, the case proved a serious lesson to him; for had the patient done otherwise than well, he should ever after (as he has himself assured me) have reproached his own defects as the cause; he therefore instantly set about learning to perform this operation, and soon succeeded so well that he has now no cause for former apprehensions."

Apparatus for Cupping.—We pass over the various instruments which have been proposed and patented for expediting the process of cupping, and also the artificial leeches, which, so far as we can learn have not been found to answer, and come at once to the instruments used by Mr. Bayfield, and we believe by Mr. Mapleson, and other celebrated professional cuppers.

The Scarificator.—"The octagonal shape is handled with the most facility It is generally fitted up with two rows of lancets, of five in a row, which act in the same direction from left to right. An alteration has, however, been made in the contruction of this instrument known by the name of "*Fuller's Improved Scarificator,*" the peculiar property of which is, that the *two* rows of lancets move in *contrary* directions, performing their half rotatory motion on the axis of the pinions, from the centre to the circumference. These pinions can be removed from the box for any purpose necessary; but principally, that the lancets may be sharpened or repaired. A screw in the centre of the box, to which a knob is affixed at the bottom, allows the plate at the top, through which the lancets pass, to be either elevated or depressed, so as to give the lancets any length that is thought proper.

Although much has been said for and against the improved scarificator, I have been induced myself to give it a preference, and I now use no other.

The Cucurbitulæ.—"The glasses which I use are of three series, of each of which there are three in number. Those of the first series are three inches in diameter, and the same in depth, with a *flat* rim, measuring about one-eighth of an inch wide. Those of the second series measure two inches and a quarter in diameter, and three inches in depth. The third and smallest size are two inches in diameter, and two and a quarter in depth. These glasses are contained (for the purpose of being rendered portable) in a cylindrical case, nine in-

ches in length and about four inches in diameter; each glass is enveloped in a flannel bag that renders them secure from being broken, which their jarring together might occasion. The smallest size is enclosed in the second, and these again in the largest.

"There is also another glass, small in size, and of an oval figure, which will occasionally be wanted in cupping behind the ears; behind the angle of the jaw; on the fore part of the neck; on each side of the trachea, on the temples, &c. &c.

"In determining the size and shape of cupping glasses, we should attach much importance to the remarks which were, as before stated, made by Hippocrates; and what he says respecting the propelling agency of large cups, is good, and worthy of being borne in mind on many occasions. It must be evident, on a little consideration, that a cup of large diameter, has to sustain the weight of a considerable column of the atmosphere, which weight exerts a corresponding pressure on the part on which the rim of the cup is attached; a degree of pressure by no means unimportant on many occasions.

"It will be right here to make a remark respecting the rim proper for cupping-glasses in general. It should be broad and flat instead of being thin and rounded as it usually is. The thin edge, if the part to which it is applied happen to be irritable or tender, or if it be placed over an inflamed viscus, occasions a good deal of pain; besides which, it produces such a degree of indentation in the skin around the puncture, as to cut off all communication between the vessels beyond the area of the cup, and those within it: and if a cup of this construction be used on a part where there is but little cellular membrane, adeps, muscle, &c., interposed between the skin aud the bone, (as the temple) the stricture will be so complete that there is little chance of obtaining any blood. The small temple glass, therefore, should, most particularly be made with a rim at least *one sixth* of an inch wide.

The torch-exhauster.—"This is a cylindrical tube of brass or silver, three inches and three quarters in length, and half an inch in diameter. The upper extremity terminated by an oblique section, the lower one ends in a screw, which is received into a globular bulb of the same metal of one inch in diameter. As many folds of cotton as will make a cord the size of the cylinder, or at least so large as scarcely to be admitted into its orifice, is to be passed into its cavity, twisted round and forced onwards, until it reaches the other extremity, when the bulb may be screwed over it; and if this be properly done, the cotton will be lodged so firmly in the tube as to require a considerable degree of force to remove it. The end of the cotton is next to be cut off, so as to leave about *half an inch* projecting from the end of the tube. That the cotton should be twisted very tightly into it is extremely essential. In withdrawing the torch from beneath the glass, it has sometimes happened, that the end of the cotton has been caught between the skin and the edge of the cupping-glass; and as the hand is moved with great quick-

ness, the burning wick is left under it, and let the operator be ever so prompt afterwards in removing it, the patient is generally severely cauterized before it is effected.

"It is at this period of the operation that the cylindrical lamp which I have adopted, will be found by the pupil (or the practitioner who has not yet acquired complete dexterity) to possess a great advantage over the "*tea-pot*" lamp (as it is called), or any other instrument in use for the purpose of producing exhaustion. The form of the tea-pot lamp is such, that the glass, whilst being exhausted, cannot be brought down near to the part to which it is to be applied; it is, therefore, necessary to hold it *over* the flame; and the quickness necessary for carrying the glass to the skin before the rarefied air shall have been displaced, communicates an impetus to the hand of the operator, which (unless he be accustomed to this mode) he cannot well regulate, and the glass consequently falls upon the skin so forcibly, that upon a tender part, it occasions severe pain; and though the adroitness of experienced cuppers (amongst whom this instrument is used) prevents this disagreeable occurrence, the learner must not flatter himself that he shall, at first, be equally successful; and should he adopt it in preference to the cylindrical torch, it will be some time before he will be able to obviate this advantage; and his dexterity at last, will be purchased at the expense of additional pain to those persons who have been the subjects of his practice."

"A temporary lamp, constructed by twisting a piece of lint, or tow, around a probe, and dipping it into spirit, is liable to many disadvantages; and these are two of the most prominent. First, the bulk of the twisted materials for burning, being too great, is very liable to occasion the disaster just described. Second, the spirit with which it is imbued, very often falls from it in its heated state, upon the skin, to the great annoyance and pain of the patient. Such a clumsy expedient should never, therefore, be resorted to; much less another that is sometimes adopted; that of throwing an inflamed dossil into the glass, putting it on the part, and leaving it to exhaust the glass whilst *burning on the skin* of the patient. Such a practice is highly reprehensible."

Minor Necessaries.—"In addition to the above instruments, the apparatus required is the following, viz.—A washing-hand basin; a piece of fine sponge; a small bottle of rectified spirit of wine; a lighted taper; a jug of warm water; some folds of lint; a piece of adhesive plaster, or of black court plaster; a box of cerate, either of wax or spermaceti; two or three napkins, and a graduated measure. The convenience of the last article cannot always be had, particularly if the operator be far from his own house, but he can readily supply the defect by using one of his glasses as a measure, having previously ascertained the quantity of blood which it will contain."

Operation of Cupping.—After furnishing himself with this simple apparatus which should be disposed of in a convenient

portable case, for the pocket, to be in readiness whenever wanted for a distant patient.—the surgeon is next instructed in the mode of conducting the operation.

" The first step necessary in performing the operation of cupping is, to set the lancets of the scarificator to a proper depth. If the lancets be set too deep, they penetrate through the skin down to the adipose substance that interposes between it and the parts beneath, leaving incisions of such a length as to allow the cellular tissue and fat to protrude as soon as the glass is applied, by which the wounded capillaries are compressed, and their bleeding entirely suppressed. On the other hand, if the incisions be too superficially made, the outer laminæ only of the skin are wounded, and unless they extend into the *cutis vera,* no bleeding ensues.

" For general purposes, let the scarificator be set so that the points of the lancets project from the face of the box to the distance of one quarter of an inch. There are particular exceptions to this rule ; when the operation is to be performed behind the ears, the depth of the lancets should be *one-seventh* of an inch ; for the temple, *one-eighth,* and for the scalp *one-sixth* of an inch.

" The next step is to select a spot (on the part chosen for the operation) where each glass is to be affixed. It should be free from the projection of any process of bone, and yet not be overloaded with fat. The parts where this inorganic substance is least likely to be met with, are over the bellies of muscles. The part therefore should be carefully examined with the fingers, and an eligible spot being found, the glass should be placed upon it, for the purpose of adjusting its exact situation, and to serve as a guide to the eye in its subsequent application. The number of glasses which should be used must be determined according as the part is adapted to receive them, and to the quantity of blood necessary to be drawn. About one glass to every four ounces required, is the usual ratio; so that if it be wished to take away eighteen or twenty ounces, and the part will allow of their application, *four or five* glasses may be put on ; as the abdomen, the back, &c. : but there are few parts where *more than four* can be applied conveniently, and often not more than two or three ; as on the upper part of the neck for instance ; and sometimes but one, as on the temple, &c. Three cups usually extract from five to seven ounces of blood at each application.

" Some hot water is now to be put into a basin, and the cups are to be immersed in it till they become warm. The part itself should be fomented with hot water ; and the operator having poured two or three drams of the spirit into a cup or glass, takes the torch in his *right* hand, and a cupping-glass in the *left,* and places the *lower* edge of the glass, in contact with his skin (in the exact spot where it is to be affixed) elevating the edge at the opposite side of the glass about an inch and a half from the skin ; the wick of the torch is now to be dipped into the spirit, lighted at the taper, and

carried under the glass *to its centre,* where it is suffered to remain about *two seconds*; it is then to be withdrawn quickly, and if it has been properly performed, the operator will feel the glass sink from his fingers, and fix itself to the part; the skin rising slowly into the glass, until it occupies nearly one-third of the space within it.

"The glass having remained affixed about a minute (during which time the top of the scarificator box should be warmed on the palm of the hand), the operator holding the scarificator in his *right* hand, takes hold of the glass with his *left,* and insinuating one of the finger-nails of his right hand beneath the glass, the air rushes into it. He instantly removes the glass; *and before the tumefaction has subsided,* springs the lancets through the integuments. The glass is then immediately exhausted, and applied as before, when the blood will be observed to flow copiously.

"The degree of exhaustion of the glasses is by no means unimportant; for if it be not carried far enough, the bleeding will be very trifling; and if, on the other hand, it be carried to too great an extent, the vessels are impaired in their functions by the loss of energy occasioned by their distention; their calibre is nearly (if not quite) obliterated by excessive elongation; the pressure of the edge of the glass is so considerable as to insulate the part from the general circulation; the punctures become closed by the quantity of integuments drawn into the glass, and a total failure is the consequence. When this is discovered to be the case, the edge of the glass should be gently elevated by the nail of the finger, so as to admit *a little air,* when, if the failure arose from this cause, the blood will begin to flow readily.

"No exactly precise rule can be laid down as to the actual degree of rarefaction proper, as it depends much upon local circumstances. If the scarification has been properly performed, and the blood *does not* flow freely, whilst no fat or obstructing substance is observed to choak the wounds though they appear of a proper depth, then (should the cup be but slightly fixed, with a small quantity of integument in it) the presumption is, that it is not exhausted sufficiently; it may, therefore, be removed, and a greater exhaustion will ascertain if the failure arose from this cause or not.

"Much dexterity is necessary in discharging the scarificator. It must be done *before* the distended part *has subsided,* which requires great quickness of hand; and yet the instrument must not be thrown rudely, or with a jerk, so as to occasion a blow upon the skin; but should be placed perfectly flat, and without any force. The dilated vessels contract with great quickness as soon as the atmosphere is admitted into the glass, and so instantaneously therefore must this part of the operation be performed, that some practice will be required before a proper adroitness is acquired. A much cleaner and more extensive cut is made by the lancets, and with less pain to the patient, whilst the skin and vessels remain in a state of distention.

"It is a practice much in use (and I formerly was in the same error) to apply the scarificator a second time to the same part, when the first attempts to obtain a flow of blood have failed; but I have long abandoned this alternative. A painful and inflamed state of the skin generally (or at least very often) succeeds these wounds, and the effect is rendered still more severe if the second incisions have been made in a transverse direction to the first; the four angles (made by this intersection) are elevated forcibly whilst under the exhausted cup, and the patient suffers almost the effects of actual laceration. Nor is there any advantage to compensate for this evil; for these second scarifications very rarely bleed better than the first. I therefore advise that some other part should be chosen to which the cup may be removed, and fresh scarifications made; but if this be impracticable, and the operator is so desirous of obtaining blood on such part, that he determines to scarify the spot again, I would recommend him to make his incisions in the *same direction* as, and *between* the others. For my own part, I had rather abandon my object than resort to such an expedient.

"Each glass, when about three-parts full, is to be removed in the following way:—It is to be grasped by the left hand, and the sponge (previously wetted and squeezed) by the right, the forefinger of which is to be insinuated under the glass at its upper parts whilst the under, and the lateral edge *farthest* from the operator, are pressed gently close to the skin, as the operation of the glass is slowly effected at the side *next* to him; the sponge being kept in contact both with the glass and the skin, is carried round to the bottom, until the separation has been completed, and the glass removed.

"This careful application of the sponge prevents the blood from running down the body of the patient, and soiling either the bedcloaths, if he should be in bed, or his linen and apparel, should he be dressed; which, in the latter case, would be very disagreeable, if he were so situated as not to be able to change it immediately, which is the case where the patient visits the operator; the necessity for cleanliness here, therefore, is doubly necessary.

"The glasses may thus be emptied and re-applied, until the quantity of blood required has been drawn; but if a sufficient number be at first used, it will seldom be necessary to remove them more than once.

"All the glasses having been removed, the hæmorrhage is effectually checked by touching the scarifications with a little spirit of any kind; but as this excites considerable smarting, many persons object to it; and as it is rare for the bleeding to continue after the cups are removed, such an application will not often be found necessary.

"The part should now be carefully washed with the sponge and warm water, and every coagulum removed which may remain in the wounds. A piece of the emplastrum plumbi, wide enough to

cover each set of scarifications, is to be laid over them, the skin being a little approximated so as to bring the lips of the wounds into contact, which facilitates their healing, and occasions less marks from the cicatrices. Some persons have complained of the irritation produced in the wounds by the common adhesive plaster, which is sometimes used; this is occasioned by the resin contained in it; the part may, in fact, be dressed with any mild ointment spread upon soft linen, or lint, and retained by some slips of the sticking plaster applied over it.

Hæmorrhage sometimes occurs, which will be found to embarrass the surgeon exceedingly; and until I began to use the means which I now adopt for stopping it, occasioned me much trouble and perplexity. This arises from the division of some branch of the intercostal arteries, in cupping on the chest, and resists all the usual styptic applications. In cases of hæmorrhage generally, I have usually found, that if it were not suppressed by a pledget of lint, confined by a roller, the application of the spirit of turpentine has been effectual; but in the instances above alluded to, all these methods have failed. The plan which I now therefore adopt, and which I always find successful, is to scrape a piece of nitrate of silver to a point, and pass it into the wound leading to the bleeding vessel; the hæmorrhage ceases immediately."

Mr. Bayfield after his very satisfactory, scientific, and minute description of the operation makes some excellent practical remarks on cupping the different parts of the body, each of which requires the management of the operation to be varied according to circumstances. We must content ourselves with one or two examples.

"*Cupping of the Scalp and Temple.*—"The hair must be shaved off; and small mouthed glasses will generally be required, as well as the use of the small scarificator. The flatness of the rim of the cups is here of particular importance, for the reasons which have been before assigned, and the rarefaction of them must not be carried to the usual extent on account of the pressure made on the skin, by the edge of the cup against the cranium."

"There is a small spring-box, armed with five lancets, made on purpose for cupping on small circumscribed parts, which is to be used here (on the temple). The depth to which the lancets must be set, has been already spoken of. It requires a less depth than is requisite in operating on some other parts, both on account of the proximity of the subjacent bone as well as the danger of wounding the temporal artery; a circumstance which, though it should happen, would, in most cases, facilitate the intentions of the operation; but still it will generally be adviseable to prevent such an occurrence from the impression which the patient might be under of its being an accident which ought to have been avoided.

The smallest sized glass, or the oval one before mentioned, is here to be used; it must be exhausted but sparingly, for the tem-

ples being merely covered with thin extenuated integument, the skin is pressed by the glass so firmly upon the bone, (if it be much exhausted) that all influx of fluid is prevented. A flow of blood is often obtained more copiously by removing the pressure of the glass from the temporal artery, by supporting it a little on the edge of the finger nail, immediately above the vessel. Twenty ounces of blood may easily be obtained from the temple by attention to these circumstances.

"The small scarificator, and the oval glass are here used; the patient reclining on his back, with his feet elevated and rested, or suspended at a distance from each other; the part having been previously shaven (as every part ought to be, when selected for the operation, where there are hairs), for hairs are found to be the means of admitting the atmosphere, and loosening the cup.

"The operation may also be performed on the *dorsum ilii*, and on each side of the knee joint."

Mr. Bayfield concludes his excellent treatise by some minor remarks, derived from experience, which appear to us to merit notice from their practical utility. With one or two of the most useful, we shall conclude this paper.

"The scarifying lancets should be anointed with a little sweet oil, by means of a feather, before they are used, and they are best cleaned afterwards, by being sprung once or twice through a roll, or a piece of new bread; they should again be oiled before they are laid by.

"Mr. Weiss's improvement on the scarificator, by which the lancets are easily taken from the box, enables the surgeon to keep them perfectly clean, as they may be individually wiped with any soft substance; a method, certainly, more effectual than any that can be devised for cleaning them while in the box.

"The glasses, after their immersion in hot water, previously to their application, ought not to be wiped (as is frequently done) but held for a few seconds over the basin to allow the water to run from them. They should be immersed previously to every application, and the water should be of such a temperature as to heat the glass sufficiently to occasion its drying quickly; for the exhaustion will be incomplete if there be any fluid left within it. The degree of heat of the water necessary to produce this effect is such, as barely to allow the hand to be put into it.

"An inch is the least space that should intervene, and more even than this if there be several cups applied: for the greater the number, so much more space should there be between them, else there is a painful separation of the integuments from the contiguous glass or glasses occasioned as every fresh one is applied.

"If the scarifications do not afford blood, they should be fomented with warm water, which will in general promote its flow; in fact, it is a little trouble well bestowed to foment the part before any step towards the operation is taken. I was directed

sometime ago to visit a lady, who had just undergone the operation of cupping from the hands of one of the best cuppers in London; but he had failed in procuring blood. I found, on my arrival, that the failure arose from a want of due circulation of blood in the skin, which was cold and constricted. As this appeared to me to be the cause of the disappointment, rather than any want of propriety in the method of performing the operation, I requested her to go into a warm bed, and desired that the part should be well fomented with flannels, wrung out of warm water, which having been continued about a quarter of an hour or twenty minutes, I applied the cupping glasses over the scarifications which had been recently made, and speedily obtained the quantity of blood originally ordered to be abstracted.

"The position of the patient should be directed so as to facilitate the operation *by relaxing* the integuments; as, for instance, if the back of the neck be the part, the head should be kept as upright as the nature of the situation will allow; I must suggest, however, as a general precaution, that where the integuments are already too loose, then, of course, an opposite position is necessary. That position is also advantageous, which tends to give to the cupping-glass a little inclination; for thereby, the weight of the blood contained in it, instead of resting directly on the part, is thrown upon the glass, and the obstruction produced by its coagulation (and which frequently puts a stop to the hæmorrhage before much blood has been abstracted) is thereby prevented.

"A set of lancets may generally be used twenty times, provided they have not been injured by being struck against bones. If they be used after they become dull, the operation gives more pain to the patient; they do not divide the parts favourably or sufficiently; whilst the scarifications are of a contused kind, not disposed to heal kindly, but often to go on to suppuration. The country practitioner should be provided with two or three sets of shifting pinions, which will allow him to send them to be repaired, without subjecting himself to the inconvenience of not having the instrument always fit for use."

Our copious extracts from this useful little work will show the merits of it much more effectually than any thing we can say in its praise. We cannot recommend it too strongly to every student, and every country practitioner, particularly those in the two sister kingdoms. By providing themselves, first with Mr. Bayfield's book, then with the instruments which he describes, and by attending with great care to his minute and excellent directions—they may by many trials succeed in acquiring sufficient dexterity in the operation, without actually attending the practical instructions of a professed cupper. This, however, should always be done where circumstances permit.

QUARTERLY HISTORY

OF

IMPROVEMENTS AND DISCOVERIES,

BOTH AT HOME AND ABROAD.

IN

Anatomy,	Surgery,	Materia Medica,
Physiology,	Practice of Physic,	Pharmacy,
Pathology,	Midwifery,	Chemistry,
Morbid Dissections,	Forensic Medicine,	Botany, &c.

Forming a useful Library of Practical reference.

I. ANATOMY.

The most prominent circumstance in this department is the publication of Mr. Lizars' Anatomical Plates, a work of very superior execution and accuracy, which has met (and most deservedly) with almost unexampled success. It is perhaps worthy of remark, that this is from the Edinburgh school, and adds one link more to the chain of superior scientific works for which we are indebted to the genius of the North. Almost indeed all the anatomical works of merit have proceeded from the same quarter; for if we except Cheselden's, we know of no anatomical work which has originated in the English schools, that could match with the anatomical productions of Munro, Innes, John Bell, Charles Bell, Fyfe, Allan Burns, Wardrop, and Lizars. With the exception of Cheselden, which is above our praise, the English works on anatomy are chiefly manuals and abridgments to facilitate the study to beginners, rather than systems of scientific detail. We must, however, give even to these their due meed of praise, and till the London school can boast of a systematic work on anatomy, we must mention with credit the useful little works of Stanley, Shaw, Green, &c., which will prove of excellent assistance to junior students. The plates of Mr. Lizars' work are among the best executed we have seen, and the letter press is also very masterly. Utility and practice has been kept steadily in view in the physiological and pathological remarks; and with the same design very ex-

cellent surgical directions for various operations are given in the form of notes. For example—

Venæsection.—"Considerable irregularity exists in the division of the brachial artery; for sometimes it divides as high up as the axilla, and frequently about the middle of the arm. As the branch which may be said to come off high up in the arm, whether it be the radial or the ulnar, for one of them generally pursues the course of the trunk, sometimes runs superficially or peripherad of the fascia of the arm, the young practitioner should be careful, when performing phlebotomy at the bend of the arm in candle light, that he does not mistake one of these branches for a vein."

Again "it" (the median) "is one of these veins which is commonly selected for phlebotomy, generally the median basilic; but here it is observed to be more than any of the other veins surrounded with nervous threads, while the median cephalic is the least: the former, however, from being large, is usually preferred, and hence nervous tumours sometimes result."

Lithotomy (*Lateral Operation*).—"The course of the internal pudic artery, along the ramus of the ischium and pubes, where, however, there is a strong protection of a dense aponeurosis, should be considered by the surgeon in the lateral operation of lithotomy. No branches of the artery, excepting the transversalis perinei, and the external hæmorrhoidal, should be wounded; and no muscles, excepting the transversus perinei and the levator ani, ought to be cut in this lateral operation." "This is the artery" (the *dorsalis penis*) "which is most liable to be wounded in the lateral operation of lithotomy, when deeper incisions are made anterior and superior, or dermal and pubic, to the membranous portion of the urethra."

On the Anatomy of the Eye. By Dr. Jacob, of the University of Dublin *.—The author of this excellent paper is well known as the discoverer of a delicate membrane, between the choroid coat and the retina, now usually called *Tunica Jacobi*, and which is here for the first time beautifully figured. He has undertaken, in this Essay, to investigate some of the points connected with the anatomy of the eye, which have been rendered interesting by the difference of opinion among scientific anatomists. The first point he takes up is,

The passage of the Optic Nerve through the Sclerotica.—Dr. Jacob thinks that the so called *lamina cribrosa* is nothing else than the extremity of the optic nerve, where the firmer tubercular portion is discontinued. Besides, if the sheath of the nerve be slit up through the sclerotic into the globe of the eye, the nerve does not appear to cease with a rounded apex behind the lamina cribrosa, as has been represented, but is obviously

* Medico-Chirurgical Transactions, Vol. XII. Part II.

continuous without any line of separation. Again, the lamina cribrosa, as it is called, has the same white colour as the nerve, and if compared with a section of the nerve at some distance, is not to be distinguished. It appears, therefore, that Albinus, Haller, Zinn, Cuvier, C. Bell, and others, have made a mistake in their descriptions, probably, from washing away the retina, and cutting off the nerve on the outside close to the sclerotica.

Canal of Petit.—The canal of Petit, according to Dr. Jacob, is formed in consequence of the folds of the corona ciliaris, consisting of two layers of hyaloid membrane, receiving injected air from one to another. That the capsule of the lens has no share (though the contrary is usually believed) in the formation of the canal of Petit, he concluded from filling the canal with air, keeping it some days in water, and then with great care removing the lens included in its capsule, when he found that the air did not escape from the cells, and he could pass a small probe all round in this canal.

Aqua Morgagni.—Dr. Jacob seems to talk doubtfully of the existence of this fluid, except in a state of disease, or after death. In the eyes of sheep or oxen while yet warm, no trace of it is to be found, though it collects in them soon after death. When it exists at all, he thinks it is confined to the anterior part.

Membrane of the Aqueous Humour.—The author thinks the lining membrane of the cornea is precisely similar to the capsule of the lens in its elasticity, and almost indestructible transparency. It is best seen in the eye of the horse, and can be detached in shreds, merely by scraping it. (See the following article on the Iris.)

Yellow Spot, Fold, or Foramen of Soemmerring.—On examining under water the eye of a young man five hours after death, the cornea and iris being cut away, and the lens removed from its place, "the optic nerve presented unequivocally the appearance of being drawn or folded, in form of a cross or star, with a dark speck in the centre, surrounded by a pale, yellow areola." The prominence of the fold was also ascertained by its shadow. No hole could be discovered where the dark speck was; for even after some days maceration in water, a probe could not be passed without tearing the membrane. On floating the membrane in water, after removing the nervous matter by maceration and agitation, the situation of the spot could no longer be ascertained.

Structure of the Iris.—The muscularity of the iris has long been a subject of keen dispute. The tissue of posterior radiating striæ, which Manoir and others suppose to be muscles, Dr.

Jacob proved to be vessels, by successfully injecting them; and he inclines to think that the muscular power probably resides in the remarkable structure in front. He has presented beautiful preparations in proof of this to the Hunterian Museum. He has also demonstrated that the black pigment behind the iris is confined by a very delicate membrane, which Dr. Jacob is seemingly of opinion, is the secreting membrane of the aqueous humour.

Membrana Pupillaris.—Dr. Jacob's observations have led him to reject the idea that this membrane disappears about the seventh month, or that it is destroyed by a rent, as supposed by Blumenbach. He has usually found it present in most new born infants, and gives a fine drawing of an injected one of the ninth month. He says the vessels become first obliterated, and then the membrane is absorbed.

Anatomy of the Fascia Superficialis. By Dr. J. D. Godman*. —The anatomy of fasciæ seems to be the least precise in the whole science, though it is of very great importance in many of the operations of surgery, and also in the discussions of physiology. Many pupils indeed revolt from the study of fasciæ, despairing of understanding it. We are therefore much indebted to Dr. Godman for the manner in which he has taken up the subject, and hope it will lead others to pursue similar investigations. According to Dr. Godman, the fascia superficialis covers with more or less degrees of firmness and thickness, the whole trunk of the body, anterior as well as posterior, together with the thighs, till it is lost in the fascia musculorum, just above the elbow. We shall give a short specimen of Dr. Godman's details.

"As we approach the os pubis, near which it covers the spermatic ring and cord, the handle of the knife may be used to separate it from the tendons reflecting it, we obtain the fairest view of the real character and situation of the spermatic cord. The fascia receives a very considerable thickening near the pubes from the lamina of cellular substance exterior to it—and it is continued over the corpora cavernosa penis as well as sends down a strong sheet into the scrotum, which has received the name of Camper's ligament. This portion descends obliquely in the direction of the cord, which it covers, and of the testicle which it surrounds. The external portion passes downwards, over the whole of Poupart's ligament to the upper part of the thigh, lying immediately under the integuments, and over the cluster of lymphatic glands and vessels, which fill up the depression below Poupart's ligament.—We may next raise the fascia superficialis from over the crest of the ilium, and pursue it

* Philadelphia Journal, No. 12.

backwards to the spine, and we may follow it downwards covering the whole of the gluteal muscles, and across covering the whole perineum.

"The platysma myoides is on the outside of the fascia, and in immediate contact with the integuments."

The fascia superficialis covers "the whole of the neck ascending in front of the edge of the chin where it is lost.—As we pass towards the angle of the jaw, we find it rising higher—and extending towards the ear, so as entirely to overlay the parotid gland." At the posterior edge of the sterno-cleido-mastoideus it splits into two portions, "thus the muscle is inclosed in a distinct sheath, the same fascia forming both the deep and the superficial covering of the neck."

We do not vouch for the accuracy of all this, as Dr. Godman has a system to support, and may be, as is usual, unduly biassed; but it is a subject certainly well worthy of investigation.

Decussation of the Optic Nerves. By M. Treviranus*.—By immersing the optic nerves in alcohol till they are hardened, Vicq D'Azyr found that the medullary fibres of the external edge of the superior and inferior surfaces of the decussation go immediately to the eye of the same side, while the middle tissue is homogeneous. From microscopical observation also, the Wenzels found the nerves composed of long fibres, some of which were large, and others narrow, not apparently separated, nor straight like the fibres of muscles, but variously arranged. The greater part of them also, such as those on the outer side of the optic nerve, follow the same direction from the eye even to the optic thalamus, while those on the inner side cross obliquely to the opposite, but without any apparent crossing at the point of junction.

"M. Treviranus, with a view of elucidating the point, has examined the optic nerves of the male *simia aygula*, which he immersed for some months in alcohol. On the external margin a glass of very moderate power was sufficient to show the fibrous structure. After again softening them, by keeping them in caustic potash, and removing their sheath and separating their fibres, he demonstrated that the external fibres of the superior side of each was continued from the cerebral extremity to that in the eye, without uniting themselves to those of the other side; whilst the internal and inferior fibres of one nerve went to the other side, and united with the fibres of the opposite nerve. It was difficult to say whether any of the fibres actually passed from the one side to the other; though he imagined some did. The whole mass of the internal fibres interlaced together had a greater volume than that of the external, which ran to the eye without uniting to those of the opposite side."

* Journal Complimentaire.

II. PHYSIOLOGY.

While we have not one English work on Physiology, the Continental authors are prolific both in systems, dissertations, and manuals. We have now before us the two first volumes of a systematic work by M. Adelon, whose name is well known to our readers*. He means to extend it to four, but if we may judge from the present execution of the book, he will find even six too small a space for his proposed plan.

In the execution of the body of his work, M. Adelon proposes 1. to study in detail each of the functions to which he has referred the phenomena of human life; 2. to establish the connection of these functions, and to point out the manner in which their combination forms the individual; 3. to study the series of changes, constituting the ages, which human life presents; 4. to point out the differences compatible with health, which present themselves in individuals, and which are known as temperaments; 5. to terminate by the study of the special forces, by which man, like all other living beings, is regulated; and the investigation of which constitutes the philosophy of the science. The two volumes which have already appeared do not complete even the first part of this plan; they include the functions of relation or of animal life; and one only, digestion, belonging to organic life.

As a preparatory step to human physiology, M. Adelon enters into an examination of the rank which man occupies in the creation; ascending in his comparisons from inorganic to organic bodies; from vegetables to animals; and thus to the being who holds the first rank among them. He details at length the physical and chemical composition of the solid and fluid parts of his body, and the mode of its organization. Together with most of his countrymen, he speaks of life as consisting in a certain series or succession of actions occurring in organized bodies; without pretending to explain, or even at the present period to investigate the cause or causes on which these actions depend.

Doctrine of Functions.—A considerable space is occupied by the discussion of the nature and number of the functions constituting human life. M. Adelon proposes as specific characters of a true function, that it should perform a special and distinct office in the animal economy, and be the result of the action of a certain and evident organ or apparatus of organs.

* Physiologie de l'Homme, Par N. P. Adelon D. M. P. &c. &c. Paris, 1823. Vols. 1 and 2.

This, though perhaps as satisfactory an arrangement as the subject admits, is not altogether free from objection: the production of heat has an equal claim with circulation, or respiration, or digestion, to be considered a function, and yet no one can pretend to fix the situation or the set of organs by which it is produced: so also of contractility (or more correctly of contraction, for contractibility or irritability implies a faculty or power, and not a function,) our knowledge is insufficient to determine with what class of phenomena it should be arranged; its general diffusion through almost all structures is apparently in contradiction to its being the result of the action of any particular organ or set of organs, the character necessary to establish it in the rank of functions. Bichât, Chaussier, and others, propose to do away with this difficulty, by calling caloricity, or the power of producing heat, and contractility or irritability, vital properties; but surely no real advantage is thus gained! The characters which M. Adelon proposes apply exactly enough to the more complicated phenomena of life, but not to the simple and fundamental ones. Digestion, respiration, absorption, circulation, sensation, voluntary motion, thought, &c., are, according to this standard, true functions; for first, they serve determinate purposes in the vital economy; and secondly, they depend on the action of particular and easily distinguished organs, or sets of organs; but they are confined to the higher orders of organization, whilst irritability and caloricity, or rather the actions to which those powers give rise, are diffused alike through the most simple and the most complicated organizations, do not appear to require any distinct organ or set of organs for their production, and present the only essential and characteristic ground of distinction between living and inert bodies. M. Adelon has disengaged himself from this embarassment by passing over irritability in silence, excepting its relations to muscularity in the production of voluntary motion, and by classing calorification amongst functions, assigning the parenchymatous structure of every part of the system, as the instrument of its production.

Arrangement of Functions.—M. Adelon admits of eleven functions, founded on the basis which he proposes, viz. 1. *sensation*, including the action of the external senses and the mental faculties, its organ being the nervous system; 2. *voluntary motion*, depending on the muscular system; 3. *expression*, including the external appearance, gestures, and articulate language, equally connected with the nervous and muscular systems, and with their functions, forming the means of communicating with the external world; in other words, constituting the animal life of Aristotle, Bichât, and Grimaud; 4. *digestion*,

or the action of the different parts of the alimentary canal, and including the subordinate functions of mastication, deglutition, &c.; 5. *absorption*, of two kinds, external or digestive, and internal, effected by the action of lymphatics and veins; 6. *respiration*, or the combination of atmospheric air with the blood, a process carried forwards in the lungs, but in man and the higher animals, to a certain extent dependent on sensation and voluntary motion; 7. *circulation*, carried on by a heat and vessels, first bringing the particle gained by digestion in contact with the air, and then dispensing them regularly to every part of the system; 8. *assimilation*, or nutrition, the action by which every part of the body selects from the circulating fluid the particles necessary for its renovation and support; 9. *calorification*, of which we have already spoken; 10. *secretion*, or the separation of certain parts from the blood by organs, the actions of which, though varying according to their structure, yet present analogies sufficient to prove the similarity of their nature and causes; 11. *generation*, the exercise of a particular set of organs, serving to ensure the continuation of the species, as the functions already mentioned do of the individual, and like many other actions of organic life in the higher classes of animals, considerably dependent on, and influenced by the functions of sensation and voluntary motion.

Among the experiments of interest made on the various functions of the nerves, we have to notice those of

M. Beclard *on the section of the pneumo-gastric.*—"M. Dupuy read a series of experiments relating to this subject, which he had made on the horse and sheep. These experiments were repeated by M. Beclard on the dog; and the following are his deductions:—1st. If we cut the pneumo-gastric nerves of both sides at the same time, the animal dies soon afterwards. 2dly. If we cut them only on one side life is not affected, and the animal is but little incommoded by the section. 3dly. If, after having divided them on one side, we wait some days, and then divide the other, the animal lives a longer or shorter period, in proportion to the greater or less distance of time which is allowed to elapse prior to the second section; and at the end of a certain time, he lives after the second experiment, as if one section only had been made. 4thly. If, at this last period, he divide both nerves, the animal dies, as in the first experiment. M. Beclard deduces from these facts, that, at the end of a certain period, cicatrization takes place between the two extremities of the nerve, so as to completely restore its functions*."

Magendie's Plagiarisms from Mr. Charles Bell.—We have a very high respect for the talents and researches of M. Magendie; but we are sorry that he seems but too deeply imbued with

* Academie Royale de Medicine.

the spirit of his countrymen, in appropriating all great discoveries to themselves, and allowing but a secondary place in the scale of merit to the philosophers who have not had the honour to be born in the *Grande Nation*. We have been led into these remarks by observing an article in Dr. Macleod's Journal, in which the writer shows most satisfactorily, that the experiments on the functions of nerves, which have lately made so much noise, are by no means new, but were actually made fourteen years ago, before M. Magendie even began his career as a physiologist. We quote a single passage from Mr. C. Bell's "Idea of the Anatomy of the Brain," dated 1809 :—

Double Roots of the Spinal Nerves.—"On laying bare the roots of the spinal nerves, I found that I could cut across the posterior fasciculus of nerves, which took its origin from the posterior portion of spinal marrow, without convulsing the muscles of the back; but that, on touching the anterior fasciculus with the point of a knife, the muscles of the back were immediately convulsed. Such were my reasons for concluding that the cerebrum and cerebellum were parts distinct in function, and that every nerve possessing a double function obtained that by having a double root."

It even appears that M. Magendie was well aware of the honour that was due to Mr. C. Bell; for in his Journal for October, 1821, he copied from Shaw's Manual Anatomy the new views of the nervous system; yet in a year afterwards, he thinks fit to say, "For a long time *I* have been desirous of discovering what effects would be produced upon an animal, by dividing the posterior roots of the spinal nerves.—I had not entertained the slightest idea of what would be the probable result of this experiment," in direct contradiction to his own words.

The Americans are making most rapid advances in experimental researches, and bid fair to rival the schools of the old world in their varied investigations. We should like to see them also cultivate simplicity of language and detail in their writings. The prose-run-mad writings, for example, of such a man as Professor Caldwell, are enough to corrupt half the young men of a College. We are glad, however, to find many exceptions to this, and among others the paper now before us, namely,

Experiments on some of the Nervous Functions. By Dr. Hopkinson.—This young experimenter undertook to repeat some of the important experiments of Mr. Charles Bell, particularly with regard to the respiratory nerves. We shall give one of his experiments as a specimen :—

"*On a young Rabbit, Wednesday, July* 24.—Exposed both portiones duræ. That on the right was destroyed by a most extensive dissection, the left but partially, as only one branch was cut.

Motion of the nose did not appear altogether arrested, on either side, which was owing to the left ala nasi acting particularly on the right. This animal is preserved, to know whether a union will take place or not. Upon a more fair and just ground, this point could not possibly rest, and if the functions return with a reproduction, it is doubly proved. At times the whole lip and nose appear at rest.

"*Friday, 26th.*—Upon a close examination I found the right lip quite motionless; on the left side, only irregular and undecided. The nose does not move as before the operation, but appears to be drawn to one side, as if the left only acted, drawing the right ala nasi to the left. Parotid gland discharging matter and enlarged, but on the left side the wound was healed.

"*July 28th.*—Now very evidently, the right side is deprived of all motion, the left imparting a partial action to the ala nasi on the opposite one.

"*August 6th.*—Wounds entirely healed, lips and nose as at last examination, but occasionally contracted by the muscles of the mouth, thus proving the perfect integrity of the nerves of "muscular motion and sensibility" of the part. A very strange alteration made in the expression of the countenance, occasioned by the right lip being contracted, or flattened to a great extent, while on the other side the usual fulness remains—hence the face is distorted.

"*September 12th.*—Seven weeks have now elapsed since the operation, and yet the parts seem in every respect as at the last examination. On trial, find the sensibility partially lost on the right, and not quite so sensible as the other. *Conclusion*—Nerve not yet reproduced, yet from the experiments of Haighton, of Pring, and others, we learn, between six and seven weeks were sufficient to restore its powers. The result of this I consider all important."

"*Wednesday, Oct. 9th.*—Upon a close examination, could perceive no motion on that side, the left only acting, although more than ten weeks had elapsed since the operation: now made an incision over the portio dura, on the left side, and passed two ligatures about one fourth of an inch apart—action not arrested until a second branch was found, and treated in a similar manner, when all action instantly ceased. Cotton ligatures were used.

"Now observed, what had not been before discovered—that a slight motion was commencing on the right side, though it is rather tremulous—the nerve appears about regaining its functions.

"*Monday, Oct.* 14.—The rabbit was found dead, its mouth being so completely crammed with food, it could neither breathe nor swallow. Dissection proved death to have taken place from suffocation, the lungs being much congested, the blood fluid, &c. The powers of the nerve seemed daily to improve, and would probably soon have been restored entirely. The right portio dura was found perfectly regenerated, appearing as one continued nerve. The left still retained the ligatures, without any change perceptible in it."

Union of Nervous Substance. By M. Larrey*.—"This veteran

* Revue Medicale.

surgeon presented to the Institute, the stump taken from the body of a man who had undergone amputation. The median and internal cutaneous nerves approximated towards each other, and formed a nervous anastomosing bulb. Several of the members thought the union accomplished by means of fibro-cellular substance, resembling that which is formed in cicatrices of other tissues. M. Larrey persisted in the opinion, that there was an anastomosis, or direct union of the corresponding extremities of the two nerves. This gave rise to a discussion whether, after the section of a nerve, the nervous functions could be re-established along the line of the cut nerve. The greater number of the academicians thought, that where one nerve supplies exclusively one or more muscles, the division of it is attended with incurable paralysis; but that where the parts to which the cut nerve goes are furnished with other nerves, as in the case of the section of the median nerve of the arm, the power of motion and the sensibility are gradually restored."

To us this seems halving the question.

The Nature of Nervous Functions. By MM. PREVOST AND DUMAS*.—We have repeatedly, in our former series, had occasion to mention the researches of MM. Prevost and Dumas. Their more recent experiments have led them into a new field of inquiry, founded on the discovery of Oersted, respecting the mutual relation of magnetism and electricity. They think it extremely probable that there exists in every nerve two opposite galvanic currents, and that this serves to explain why the magnetic needle experiences no influence when placed by the side of the nerve at the moment of a violent muscular contraction. Neither is it affected when placed beneath the muscle, or above it, under the same circumstances; and this must depend upon the short distance which separates the ascending and descending filaments of each nervous branch. It remains to explain the contractions produced by the influence of the brain. The authors think that they likewise depend upon galvanic currents; and they have endeavoured to prove this in some circumstances which appeared to them favourable for that purpose. They at first attempted to intercept the current in the pneumo-gastric nerves; they afterwards placed animals under the influence of the nux vomica; and, during the existence of the tetanus, they endeavoured to ascertain its presence in the different portions of the brain, or in the spinal marrow, or in the sciatic nerves, first whole and then divided. The results have not yet attained a sufficient degree of regularity for publication, but being now occupied in these different researches, they still hope to be able to satisfy the curiosity of physiologists on this point.

Obstruction of Blood in the Lungs. By DR. WILLAMS†.—

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* Archives Générale de Medécine. † Annals of Philosophy.

From several very judicious experiments, Dr. Williams has drawn the following corollaries :—

"1. That the blood is obstructed in its passage through the lungs, on suspension of respiration, while its circulation through the other parts of the body still continues.

"2. That the obstruction of the blood in the lungs, on suspension of respiration, is not the effect of a mechanical cause.

"3. That the obstruction of the blood in the lungs, on suspension of respiration, arises from a deprivation of pure atmospherical air.

"4. That the blood which is found post mortem in the left auricle and ventricle, is the remnant after the last systole, and the subsequent draining of the pulmonary veins.

"5. That the obstruction of the blood in the lungs, on suspension of respiration, is one of the principal causes of the vacuity of the system circulating arterial blood, post mortem.

"6. That the immediate cause of the cessation of the action of the heart is a privation of its natural stimulus, arising from the obstruction of the blood in the lungs."

He concludes—

"Now I flatter myself that the cause of the phenomenon that reserved the discovery of the circulation of the blood to modern times, and to the honour of our country, has been disclosed; and that no one, for the future, however sceptical, will be able to urge the vacuity of the arteries after death as an objection to the doctrine of our immortal Harvey."

III. PATHOLOGY.

This seems to be the department of medical science in which at present the greatest activity is in operation. This is laudable, but we fear it is, and will be carried too far, to the exclusion of more practical and useful inquiries. Morbid dissection is undoubtedly of high importance; but when it is performed, with the view of supporting some favourite theory as it most frequently is, particularly in France, and among the Clutterbuckians and others at home—we think that it is likely to be more productive of evil than good. The old system of symptom hunting, bad as it was, seems much less calculated to prove injurious. We are the more particular in mentioning this that all the medical journals at home manifest a strong leaning to this deceptive field of speculation. In the Transactions of the Associated Apothecaries reviewed above, we have seen it carried to the highest point of visionary absurdity. We are happy to know, however, that this dreaming system is more written about than practised in this country, and we hope it will long continue so.

Pathology of the Spleen. By a CORRESPONDENT.—"Even at this day, the office of the spleen is so little known, that perhaps every fact concerning it, however inconsiderable, is deserving of attention. On this account, the following case of enlarged spleen has been summarily drawn up, and accompanied by a few brief remarks:—

"*Case.*—A mongrel, the offspring of a Newfoundland dog and a pointer bitch, in the seventh year of age, had, for the two years previous to his death, been troubled with a cough, which was aggravated by running. Within the last three or four weeks of his existence, the cough disappeared, and left behind it a wheezing and breathlessness, much increased by anything that agitated him, and after that he was hardly ever able to lie down; and if he chanced at any time to fall asleep when in a sitting posture he often fell, but instantly sprung up again. His body had become emaciated, his eyes dim and large, and his countenance old-like and withered: his feet and legs inclining to swell; his abdomen hard and tumid, and more so after eating, particularly on the left side; appetite continued, but he ate sparingly and often; his sight and smell were imperfect, but his hearing as quick as ever. From stupidity he had lost all idea of cleanliness. His stools latterly were thin and bilious; his breath was fœtid; his urine at times plentiful. His size was that of a pointer. In this state he was hanged. On laying open the thorax, the lungs and heart were found swimming in water. In some places the former were hard and swelled, and glued to the left side and to the diaphragm, and when cut open, showed a whitish substance resembling white or yellowish dry rotten wood. One lobe was of a dark or purplish colour, and as firm as a piece of liver; but in other parts the lungs were not diseased. The heart was in its natural situation, and of its usual size. Close to it, on its left side, was a whitish bag, of the same size as the heart, which had an elastic feel, and evidently contained a fluid. On making a small opening into it with a scalpel, a fluid, like yellow serum, sprung out to the distance of two feet, and on laying this bag open, its inner sides showed an incrustation, in appearance like yellow rotten wood, only finer in its grain. Not a drop of water was contained in the abdomen. The liver, the intestines, and kidneys were quite sound. The stomach bore a great resemblance to the colon, being long and narrow. The gall-bladder contained hardly any bile. The spleen was prodigiously enlarged, and in appearance five times the size of a cow's. It was quite solid and of a dark red colour, seeming to contain nothing but blood-vessels, immense in number, and of very small size. The vessels that supplied it seemed to be of their natural size. It covered the whole surface of the intestines, and seemed to be in a state of rapidly progressive enlargement. It was thought that this dog's complaints were occasioned by his being obliged to lie all night in a cold damp out-house, after having been always accustomed to a warm dry lodging. When the disease was still in its infancy, he was removed to a better situation, yet it continued its progress.

It would seem from this, that the enlargement of the spleen had some connection with the diseased state of the stomach; in short, the spleen seems to have been a diverticulum for receiving that blood which could no longer be admitted into the vessels of the stomach. At other times, when the spleen resists enlargement, the vessels of the stomach give way, and hæmatemesis ensues. I have seen several cases of elderly people, which I suspected were of this nature. Diemerbroeck thinks, that when the liver is any way obstructed, there may be a retrograde motion of the splenic vein, by which its blood may be emptied into the stomach by the vasa brevia, or into the intestinal canals by the meseriac veins; and, on the contrary, when the blood does not find an exit in those ways, it will distend the spleen itself. In a case of diseased or schirrous spleen, Diemerbroeck saw three chamber-pots full of an ink-like fluid passed by stool. Many of the ancient authors have spoken of a connexion betwixt the stomach and spleen, and the same thing has been adverted to by some late German authors. It would be an easy matter to collect notices on this subject from books; but the investigation would be rather pedantic than useful.'

Singular Affection of the Heart. By Dr. Fischer, of Hildburghausen*.—In this uncommon case, detailed by Dr. Fischer, both the patient himself and also the by-standers, among whom was a physician, could distinctly hear the beating of the heart for six or eight weeks previous to death. They were not only sensible of the noise in the region of the heart, but, on feeling the pulse at the same time, it was observed the pulsations were simultaneous with it. This noise had a great resemblance to the croaking of a frog, and it could be heard easily at the distance of five or six paces from the patient. On examination after death, the auriculum dextrum and the vena cava ascendens were found dilated to a considerable size. The right ventricle contained a firm polypus, of about an inch in breadth; one division of which protruded into the auriculum dextrum; the other into the arteria pulmonalis.

Hypertrophia of the Heart. By M. Chomel*.—At a late sitting of the *Académie de Médecine* of Paris, M. Chomel presented the heart of a man who had died at the *Hôpital de la Charité.* The parietes of the right ventricle shewed such a hypertrophia, that its cavity was almost blocked up. The orifice of the pulmonary artery was so considerably contracted, that it could not admit the extremity of the little finger. In the remainder of its extent, the pulmonary artery was of its usual diameter. The other cavities of the heart had preserved their natural proportion. The patient had laboured under the ordinary symptoms of aneurism. There was every reason to believe

* Medicinisch Chirurgische Zeitung. † Archives Générale de Médicine.

that, in this individual, who was quite young, the extreme narrowness of the opening, between the right ventricle and the pulmonary artery, was congenital, and that it favoured the developement of the hypertrophia of the right ventricle.

Pathology of Plague. By M. VALLI.*—This author is well known for his intrepid investigations of the plague; and from his experiments he has been led to draw the following conclusions:—

"1. The plague is a *contagious* disease, and persons who have *once had it,* are *very rarely* attacked a second time.

"2. The infection can be communicated to a person, by rubbing the matter of a pestilential sore on his skin.

"3. If pestilential matter, and variolous matter, be mixed together, and rubbed on the skin of an individual who has not had the small-pox, or the plague, it will produce a mild plague, which is free from danger, and will protect against future infection. But the plague will not be so mild, if the person thus infected has previously had the small pox.

"4. If pestilential matter is well mixed with sweet oil, or unctuous matter of a similar quality, and rubbed on the skin, it will communicate a mild and safe pestilential disease, which generally protects from future infection.

"The above conclusions were derived from about three hundred experiments, carefully conducted."

Nature and Causes of Hydrothorax. By J. BAIRD, of Leadhills, Scotland†.—"The peculiar circumstances which seem to operate as causes of hydrothorax, are such as to rank it among diseases of increased vascular action, viz.—those most liable to the disease, are such as suffer from visceral obstructions, who have been intemperate, particularly in regard to the use of ardent spirits; such as have laboured under asthma; such as have had frequent acute inflammatory affections of the breast, and which may have left a teazing cough for after-life; and above all, such as have been exposed to breathe noxious or confined air. The operation of this *last* cause has been the mean of sending me more patients with this disease, than all the others together: for the miners must sometimes work in places where there is so little circulation of air, that their candles can scarcely burn; and I have almost invariably observed, that a continuance for any considerable length of time (although in such situations they may only work three or four hours daily), brings on pneumonia in the young and plethoric, and hydrothorax in the old, if rather of spare habit of body; and if there should happen to be any healthy middle-aged men working as hand-neighbours to these others, although of course both must breathe the same impure air, these middle-aged men will remain free from any *urgent* complaint, till both their young and their aged neighbours are laid aside, perhaps never more to return. I became

* Philadelphia Journal. † Edinburgh Medical and Surgical Journal.

so fully convinced of this fact, as long ago to have induced me to recommend to the agents and overseers of this place, to avoid, as much possible, putting either very young or very old men into such situations.

"The only *theory* which I could form on the subject was, that in asthma, frequent coughing, or breathing impure air, the chest, being overdistended, not only runs a risk of rupturing some of the capillary vessels, but also produces an increased flow of blood in those parts, which, in the old and weak, will only produce an effusion of serum; but in the young, will excite more urgent symptoms, by inducing acute inflammation. And thus I was disposed to apply the same depleting plan to both cases, only modified, of course, to meet the strength and constitution of the patient. I avoided giving a variety of diuretics, or using blisters, &c., that I might be the better able to judge of the real benefit derived from the bleeding."

Pathology of Mania. By M. Hufeland*.—"It is a well known opinion of M. Esquirol that mental alienation often depends upon an anomalous situation of the arch of the colon, and especially upon a vertical position of this intestine; the following case appears to bear upon the point. A woman, aged forty-five, and of a constitution otherwise perfectly healthy, fell into a deep melancholy on the death of her husband, to whom she was tenderly attached. One of the concomitant signs of this melancholy was a great enlargement of the abdomen, accompanied with an oppression of the respiratory organs, and to which succeeded a state of mania, which continued unabated for two years; at the end of which period the patient committed suicide.

"On examining the body, besides the ordinary signs exhibited by a body destroyed by hanging, an excessive protrusion of the abdomen was remarked, equal to the size of a woman in the last month of her pregnancy. The head exhibited all the signs of plethora usual upon these occasions. In the thorax there was nothing remarkable. In the abdomen, all the intestines were more or less distended with gas, and showed well-marked signs of inflammation. The stomach, as well as the bladder and uterus, appeared perfectly healthy, whilst the liver and the spleen were of an enormous size. But what especially attracted attention, was the total displacement of the transverse arch of the colon, which, with the ascending portion of this intestine, formed a species of triangle."

Pathology of Aphonia. By Dr. Ryan, of Kilkenny†.—"Speech may be injured or suppressed by diseases of the nerves which supply the organs that assist in producing that noble faculty,—by pressure or wounds on those cerebral productions; by affections of the larynx, its muscles, ligaments, cartilages; by disorders of the

* Journal der Praktischen Heilkunde.

† Edinburgh Medical and Surgical Journal.

glottis, trachea, fauces, palate, sinuses: by tumours or polypi; by ozæna, cancer of the lips, cheeks, or nose; by inflammation, enlargement, schirrus, cancer, or congenital vitiation of the tongue; or by its frænum being too short. Forestus describes inflammation and suppuration of that organ; and Galen mentions a case of œdematous tumor of it, so great as to cause it to be protruded from the mouth; and a second case, which did not proceed from schirrus or œdema, though it increased to a considerable extent, but from too copious a supply of aliment deposited in its substance. Claudinus was consulted in the case of a girl, aged twelve, whose tongue was wonderfully enlarged, not from œdema, schirrus, or other vitiation of its structure, as it readily diminished by pressure; but it proceeded from a rupture of the frænum linguæ, which caused a great determination of blood to that organ; and, strange to relate, this tumour was said to increase in the morning and become livid, while it declined in the evening! I have lately seen a case of schirrous enlargement of the tongue, which was greatly aggravated by the use of mercury, and which suppressed the faculty of speech, and ultimately destroyed the patient. I divided the frænum linguæ in a girl, aged ten, who could scarcely speak, yet obtained an evident degree of fluency immediately after the operation. If both recurrent nerves which supply the larynx be divided, speech and voice will be abolished; if a wound be made below the larynx, voice will be suppressed; if above it, speech will be destroyed; and the diminution or destruction of nervous power in the fifth pair of nerves is the principal cause of loss of motion in the tongue. Avicenna relates a case of aphonia, induced by the application of deep scarifications to the occiput, which, he said, wounded some of the nerves that proceed from the cerebellum through that part. If cutaneous eruptions be suddenly repelled, or congestion of blood take place in the fauces or tongue; or the suppression of periodical evacuations in plethoric habits; or the influence of fear or other passions; the too free use of spirituous potations; or whatever injures or destroys the parts connected in producing voice or speech, will cause an abolition of that faculty. Certain spasmodic diseases, as hysteria, also effect it. I have seen two cases, in both of whom the incisores teeth had been displaced by external violence; they laboured under paraphonia until these substances had been replaced, after which the voice and speech became natural, and the teeth perfectly firm. In low fevers, or in apoplexy, the voice is regained slowly; and in the case of a young lady, who was in the last stage of phthisis, I lately observed this clearly illustrated: she lost the power of speech for thirty hours, appeared moribund, pulse scarcely perceptible; the oleum ammoniatum was applied to the external fauces, which caused several feeble motions of the tongue and efforts to speak; which faculty she gradually regained, and retained to the third day, when she expired."

Pathology of cerebral disease—By Dr. Scoulton of Metz*. This author has made some researches for the purpose of illustrating the connexion between irritation of the mucous membrane of the intestines and the pia mater. He thinks that diseased states of this last-mentioned delicate membrane have been often overlooked, in consequence of the changes in its structure not being very conspicuous to the hasty and superficial observer. We conceive, however, that the changes of structure indeed, in this tissue, are more easily detected than those in most other parts of the body. In a state of health this web is perfectly transparent, thin, and colourless, without adhesions. Any deviation from this state must therefore be one of disease. It is no doubt desirable, but seldom possible, to have a healthy brain to contrast with an unsound one when we are prosecuting *post mortem* researches. This was the plan pursued by Wenzel in examining the brains of epileptic patients. Dr. Scoulton thinks that all parts of the intestinal canal do not sympathise equally with the brain. The stomach and small intestines possess a much closer affinity with the meninges than the great intestines. So it is with respect to the different coats of the intestines. While inflammation of the mucous membrane gives rise to corresponding disturbance in the pia mater, this last remains free from all sympathy in peritonitis. When the mucous membrane of the stomach or small intestines is inflamed, Dr. Scoulton has observed the vessels of the pia mater injected with blood, forming red patches, and sometimes amounting to extravasation. These appearances are chiefly found in the anterior and lateral parts of the brain—unless the abdominal inflammation be very violent, in which case nearly the whole of the pia mater is affected—its minute vessels carrying red blood, and giving rise to effusion and adhesions. Dr. Scoulton thinks that these views are likely to bear on and elucidate many of the phenomena of apoplexy, on the principle of every inordinate excitement of the stomach being communicated to, and, as it were, repeated in, the brain, thus occasioning determinations of blood to the head, and rendering its vessels gradually more debilitated and ready to give way under any particular increase of action.

On Sublingual Pustules in Hydrophobia. By M. Magistel†. We mentioned, in our former series, the communication of Marochetti, of Moscow, respecting the sublingual pustules observed by him in hydrophobia, and also the failure of M.M. Ma-

* Journal Universel and Medico Chirurgical Review.

† Journ. Général de Médecine.

gendie and West, in discovering any pustules in a case under the care of the latter *. M. Magistel, of Saintes, it would appear, has been more successful than Mr. West. Several individuals of both sexes, and some sheep, having been bitten by a rabid dog, M. Magistel was sent by the administrative authorities, and he cauterized the wounds forty-eight hours after the accident. He carefully watched for the appearance of the pustules mentioned by M. Marochetti; and in several subjects confided to his care, he observed pustules arise, unknown to the patients, without any precursory symptoms, and without occasioning pain, or cramping the movements of the tongue. Some of these pustules appeared on the sixth day, others subsequently, and the last on the thirty-second day. The cauterization of these was soon followed by their perfect cicatrization, no traces remaining of them, and the cauterized parts being in the best possible condition. The *decoctum genistæ* was perseveringly administered to all those who were bitten, and was used for washing the wounds, which unfortunately had not been cauterized until forty-eight hours after the accident, except incompletely, by the nitric acid, at the expiration of more than forty-five hours. Of ten bitten, whom M. Magistel attended, many of whom had received numerous and deep wounds, five died with all the symptoms of the most confirmed hydrophobia, in spite of the uninterrupted use of the *decoctum genistæ*, and the cauterization of the sublingual pustules.

On the Sublingual Pustules in Hydrophobia. By M. Villerme †.—The preceding facts are farther confirmed by the following: M. Villermé has communicated to the Royal Academy of Medicine the case of a female, whose upper lip was torn by a mad dog. The wound was cauterized at the end of thirteen hours. On the eighth day, a transparent pustule was seen under the left side of the tongue, of the size of a lentil, similar to the pustules observed by M. Magistel under the same circumstances. On the following day this vesicle had disappeared, but was replaced by another, which only lasted twenty-four hours. On the tenth and eleventh days, several other pustules shewed themselves; but after that period no others were observed. It is added, that three weeks have elapsed since the bite, but as yet the woman has not shown any signs of hydrophobia.

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* See Quarterly Journal of Medicine, Vol. IV. p. 353.

† Revue Medecale.

IV. MORBID DISSECTIONS.

This division of our History is closely connected with the preceding, and perhaps scarcely merits to be separated; but we think it better to give a few cases of *post mortem* examination distinctly apart and in more detail.

Case of Enlarged Spleen.—By James King, Esq., Hamilton, Scotland*. The patient in this case was a tall young man aged 20, of strumous constitution. Mr. King treated him for epistaxis and afterwards for phthisis. Upon a deep seated, hard swelling being discovered in the hypochondriac region he was put under mercurials for six weeks, but became worse, had repeated epistaxis, much cough, dyspnœa, anasarcous extremities and, latterly, symptoms of abdominal inflammation which became fatal.

Dissection—"After removing the integuments of the abdomen, our attention was first directed to the peritoneum, which we found very much inflamed, thicker than natural, and quite opaque; its adhesion to the abdominal muscles was nearly destroyed by the intervention of a quantity of purulent matter; but to the omentum and abdominal viscera, with which it is [*was*] in contact, it had formed many strong connexions, which it required considerable force to destroy, After removing these connexions, a quantity of a high-coloured liquid (about a gallon and a half) was removed from the abdomen before proceeding farther with the dissection. On examining the stomach and alimentary tube, they were found much inflamed, and covered with a network of small vessels carrying red blood. Turning aside the intestines, so as to expose the tumour in the left side, we found that it was, as had been supposed, an enlargement of the spleen, which was found firmly adhering to the large end of the stomach, and to part of the transverse arch of the colon, by a tense, white, transparent membrane. We next removed this viscus from the abdomen, and found it very much enlarged indeed, not being less than seven or eight times its natural size; its coats had been chiefly affected with the inflammatory action, which had evidently extended to the intestinal tube: on cutting into its substance, a quantity of whitish fluid could be pressed out, but in colour, consistence, and other respects, it was quite natural. On examining the liver, it was found unaltered in structure, but considerably increased in size; the gall-bladder was nearly twice its natural size, and completely distended with bile of a brownish yellow colour. All the rest of the abdominal viscera were perfectly healthy. In the thorax the following were the morbid appearances:—The left lung was found healthy in

* Medical Repository.

every respect; but on examining the right cavity of the thorax, considerable disease was brought into view; it contained about half a gallon of a greenish watery fluid, which being removed, the lung of that side was found greatly diminished in size, and much firmer in texture than natural—so much so that it could be of very little use as a respiratory organ; in many parts it was adhering firmly by short, ligamentous bands to the pleura costalis. About five table-spoonfuls of fluid were found in the pericardium, but the heart was found to be healthy."

Case of Intussusceptio. By F. Bush, Esq.*—" J. Coombs, a lad twelve years of age, was attacked with pain in the umbilical region: some mild laxative was given, without affording relief. On the second day I saw him: the disease was marked by sickness, vomiting, severe pain extending over the abdomen, a dry brown tongue, skin extremely hot, and the pulse corded, hard, and small, making 120 beats in the minute. The case was clearly marked as being inflammation of the bowels: blooding, laxatives, the warm bath, and blisters, with the usual remedies for subjugating such a disease, were used without benefit. On the fourth day, when he appeared much exhausted, and his dissolution was expected, a considerable quantity of feculent discharge, mixed with blood, took place per anum: from this time the bowels were easily acted on by the mildest laxatives, the sickness left him, the pulse became less frequent, and his pain inconsiderable. Matters went on thus favourably until the eighth day from this attack, when a portion of bowel was voided with a common alvine discharge: this portion, fifteen or eighteen inches long, was part of the ilium. From this time his convalescence was regular and rapid; but he complained of pain in attempting to gain the erect position, and was obliged to keep himself bent forward for three or four weeks, at which time he had regained his health; the bowels being regular, but rather relaxed.

" About twelve weeks after his complete recovery, he was attacked with typhus fever, of which he died a fortnight after the seizure. I availed myself of the opportunity to examine the contents of the abdomen after death. The traces of the diseased bowel were visible, by a considerable puckering and contractiou where the slough had taken place, and the parts had united; yet there did appear sufficient room for the feces to pass, and, but for the febrile attack, he might have enjoyed ordinary health. The part that formed the intussusception, and which came off with the alvine discharge, together with part of the mesentery, and the alvine portion where the union had taken place, I thought worthy of some anatomical collection, and therefore took the liberty to send it to Sir A. Cooper."

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* Med. and Phys. Journal

V. SURGERY.

Improvements in surgery are rapidly advancing: scarcely a month passes without some new and important discovery or invention, particularly in the severer operations. Sir Astley Cooper has been very successful, as we have seen, in removing vesical calculi, by dilating the urethra; and we have just had put into our hands the work of a younger candidate for honourable fame, in which a method is proposed of rendering the operation of lithotomy more easy, safe, and simple. The posterior operation, as Mr. Sleigh denominates his method, is an improvement on the recto-vesical operation of the continental surgeons, with which our readers are well acquainted. In none of the accounts which we have of the recto-vesical operation, is there any hint made, says Mr. Sleigh,—

"Of the operation through the intestinum rectum having been performed without dividing the sphincter ani muscle, and prostate gland, which alone constitute an essential difference between it, and the method proposed in this work; for in the first place, the division of the sphincter ani muscle (as practised in these cases) must vastly augment the sufferings of the patient, and contribute towards a tedious recovery: secondly, the division of the prostate gland can scarcely be accomplished without wounding one of the excretory ducts of the testicles and vesiculæ seminales; and, lastly, the passing of the urine through the wound, which could not be obviated in this method of operating, must, as in the lateral one, prevent the wound healing by the first intention (which, when practicable, is an important desideratum in almost all wounds), and increase the hazard of callous edges, and a urinary fistula. Now, in the method proposed by the author, the sphincter ani muscle is not touched—nothing is divided but mere membranes, which, in a healthy condition, may be said to be *almost* insensible; the vasa deferentia can only be wounded, through the ignorance or awkwardness of the operator: and, lastly, there will be the same probability of the wound healing by the first intention (as the urine is not permitted to pass through it), as a simple incision in any other part of the body."

Mr. Sleigh's *Posterior Operation of Lithotomy**.—The part of the bladder which Mr. Sleigh divides, "is bounded laterally by the vasa deferentia and vesiculæ seminales; superiorly by the *cul-de-sac* of the peritoneum; and inferiorly by the pros-

* An Essay on an improved Method of cutting for Urinary Calculi; or, the Posterior Operation of Lithotomy. By W. W. Sleigh, M. R. C., and Lecturer on Anatomy and Surgery in London, &c. pp. 104. 8vo. with a plate, Anderson, London, 1824.

state gland, and the union of the seminal tubes," giving a base of one and a half inches, and a height of two inches. The instruments which he uses are an improved speculum ani or dilating forceps, and a staff with a scalpel seven inches long, and an inch and a quarter broad, protected by a sheath which is retracted during the operation by a spring. Lithotomy forceps of various sizes are employed in extracting the calculi, if not expelled after the incision.

" The state of the constitution having been regulated according to the directions in another part of the work, and an enema administered, the patient is put in the same situation as for the lateral operation. The speculum ani (having lain in a little warm water for some time previously, and then rubbed with a little sweet oil) should be gradually introduced into the rectum; the screw should then be slowly and steadily turned, by means of which its blades are separated, and the power of the sphincter ani muscle overcome. The anus thus opened to a sufficient extent* (transversely), the index finger of the left hand should be placed on the posterior edge of the prostate gland, which is the anterior boundary of the part of the bladder to be divided. The scalpel is then to be introduced, and by measuring the knife with the index finger, the length of our incision can be regulated with accuracy, according to our wishes. The staff having been previously introduced into the bladder, will be felt pressing the coats of the viscus against the intestinum rectum. This will be an infallible criterion by which we can judge of the situation for our incision, and of the nature of the substance interposed between the staff and our finger. We can then divide the parts directly on the staff, or by its side. Upon the incision being made the urine will gush out, and in all probability the stone will be forced out in the same moment. Should the calculus not escape with the urine, the common forceps is to be introduced through the rectum into the bladder, and the stone extracted according to the principles given for the lateral operation.

" The bladder can be washed out by means of a syringe, with a little tepid water. After this, a gum elastic catheter is to be introduced into the bladder through the urethra, and kept in till the adhesive process of inflammation commences, so as to unite the divided surfaces. The patient is to be given an anodyne, composed of about thirty or forty drops of the tincture of opium. He is then to be put to bed, and to be kept lying on his abdomen, till the time above mentioned for removing the catheter, The object I have in view for this last direction must be obvious, namely, to prevent the urine escaping through the incision into the intestine, which would necessarily retard the union of the parts. By observing the above plan another grand object is accomplished, that of

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‡ " We may safely dilate it from two to three inches in an adult."

preventing the urine insinuating itself into the cellular substance. In the natural position of the body, that is, lying on the back, the wounded part of the bladder would be the most depending part; consequently, when the body is prone, the part alluded to is placed in the reverse position; the urine dribbling from the ureters will accumulate in the fundus of the bladder, and pass off by the natural channel through the catheter."

Mr. Sleigh, in the other parts of the work, mentions the objections to his method; the advantages of it over the lateral operation; the symptoms of vesical calculus; the preparatory regimen; the history of lithotomy, &c. He sums up the whole with the following conclusion:—

"First, The lateral or present method of operating for urinary calculi is (independent of the dangers to which it is *exposed*) invariably, and unavoidably, *from the very nature of the operation*, attended with three great inconveniences, viz. excruciating suffering (Cheselden)—the impossibility of the wound healing soon (Bell, &c.), it being necessarily kept open for a *length of time*;—and, lastly, the loss of much blood, the only one of the three that does not invariably occur.

"Secondly, The lateral operation is one, when performed, even by the most eminent men, extremely dangerous (Cheselden, Bell, &c.)

"Thirdly, The proposed operation (the posterior one) is attended with little or no pain; with very little loss of blood; and with the probability, in ninety-nine cases out of a hundred, of the cut being perfectly healed in forty-eight hours.

"Fourthly, These assertions are founded upon natural facts; the parts divided in this operation having been repeatedly wounded with the greatest impunity; and healed remarkably well.

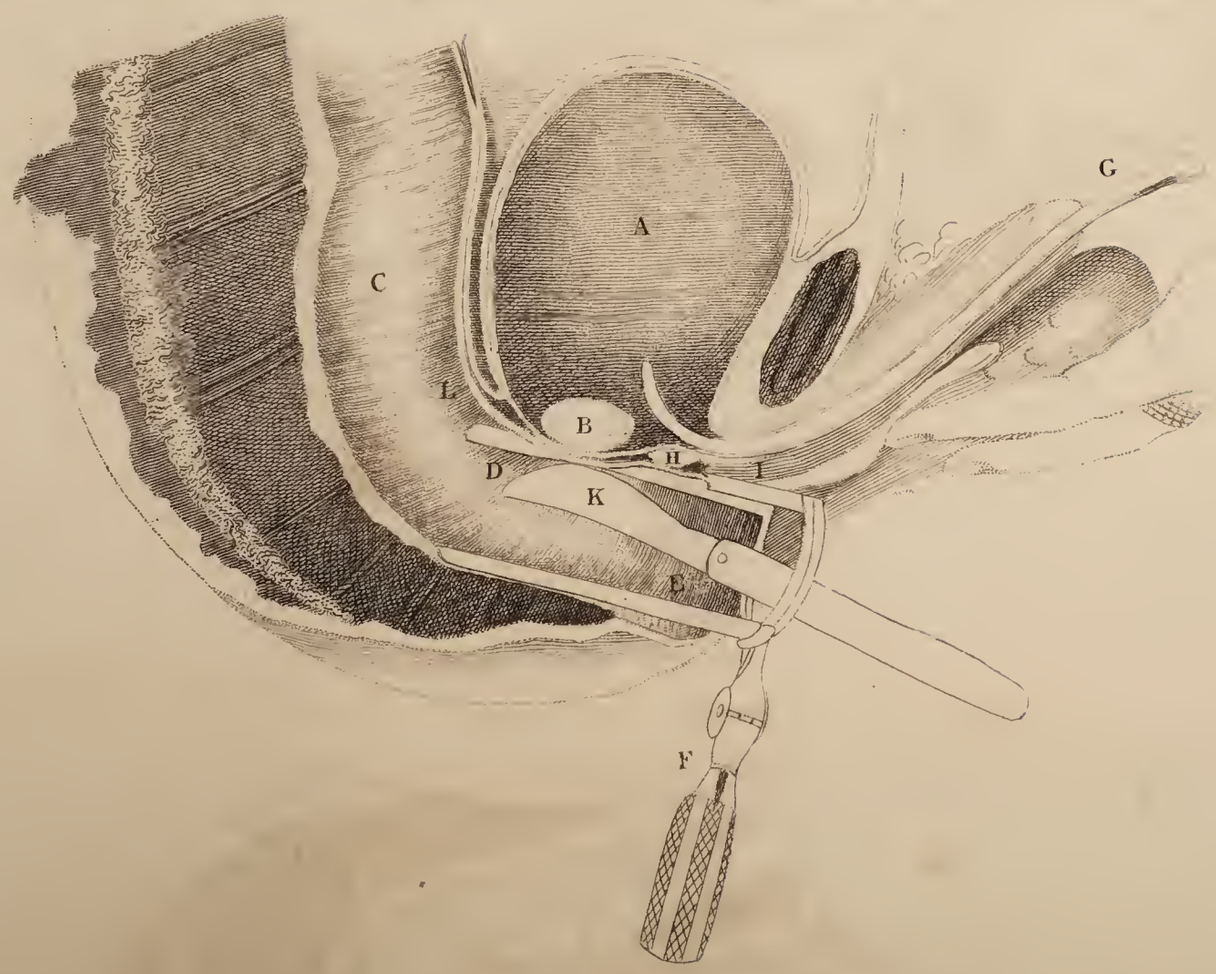
"Fifthly, The objection, 'that the bladder, being frequently in a diseased state from the presence of a calculus, might prevent the healing immediately of the wound, and contribute much towards a fistulous communication between these viscera,' can be most satisfactorily answered; for while it is granted that the bladder is generally diseased while it contains a calculus, and that this might prevent the wound in the *coats of the bladder* directly healing; it is to be recollected, that there is something else *besides the coats of the bladder* divided in this operation, namely, the healthy intestinum rectum; so that the wound in the bladder healing *directly* is but of minor consideration, provided the incision in the intestine be immediately healed, or at least that the communication between the two viscera be obliterated, which is proved will be the case.

"Sixthly, That the lateral operation is extremely liable to certain dangers, viz. violent inflammation, extravasation of urine, and fatal hemorrhage; to which the posterior, or my method, cannot possibly be considercd in the one-hundredth degree.

"Seventhly, Were there not even facts to corroborate this asser-

A Vertical Section of the Pelvis, exhibiting the relative Situation of the parts concerned in the

POSTERIOR OPERATION OF LITHOTOMY:



Drawn by my Pupil Mr. C. C. Eyre of Bristol.

For Anderson's Journal, p. 131.

Published by J. Anderson, 40 West Smithfield

tion, the nature of the parts divided in the two operations should be sufficient to convince any person acquainted with them, of its correctness.

"Eighthly, That the peritoneum being considered peculiarly favourable, or predisposed to extensive and fatal inflammation, is a doctrine founded upon an ancient prejudice, and without a single physiological or pathological fact to substantiate it.

"Ninthly, and lastly, That all the objections which have been hitherto advanced against the high operation, the apparatus major and minor, the Merean operation, cutting on the *gripe*, and the recto-vesical operation (as now practised on the Continent), are all effectually obviated by the posterior one."

We think that Mr. Sleigh should have endeavoured to obtain a case or two, in which his method had been tried before he ventured to publish a book; and that he should have copied it out correctly before sending it to press, as we find many inaccuracies in the style. His proposal is certainly ingenious, even if it should not turn out so safe and practicable as he sanguinely hopes.

To render, however, his proposition perfectly intelligible he has given an engraving of the part to be operated upon, with which he has kindly favoured us, and it will be found as a frontispiece to our present number. The following is

The Explanation of the Plate.

A. The Bladder.
B. The Calculus.
C. The Intestinum Rectum.
D. The coats of the Bladder, and Rectum in contact and the part which is divided in this Operation.
E. The Sphincter-Ani Muscle.
F. The Speculum Ani, or Dilator.
G. The Staff.
H. The Prostate Gland.
I. The Bulb of the Urethra.
K. The Scalpel.
L. The Cul-de-sac of the Peritoneum.

Mr. Shaw, of the Anatomical Theatre, Great Windmill street, continues his indefatigable investigations, and has just published a work on the distortions of the spine *, the analysis of which as the accompanying plates are not yet published, we shall reserve for our next number.

The following extract, from an American Medical Journal, will show the spirited exertions which are there making after improvement. The communication seems to be drawn up by an admiring pupil.

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* On the Nature and Treatment of Distortions, to which the Spine and Bones of the chest are subject, &c. By John Shaw, surgeon, &c. 8vo. London, 1823.

Mode of teaching Surgery. By Professor Gibson, *of the University of Pennsylvania.**—"In treating of gun-shot wounds, he illustrates all that is said by showing us the character of such injuries by shooting at the different parts of a subject, tracing the ball, and exhibiting the peculiarities of the wound to the class. The superiority of this mode over that of simply *talking* on the subject is at once evident to all.

"He does not content himself with giving us abstract notions of *dislocations*, by merely showing the dry bones displaced, but by having the joints opened and dividing the ligaments, he displaces the bones in the various ways that we know to result from accident. Thus it has nearly the exact appearance that the real injury would present, and we understand with facility the operations necessary to reduction.

"In explaining the diseases of the eye, the class are assisted by highly magnified and beautifully coloured paintings, on a scale of two feet to each eye. The diseases of the antrum and nose are made plain by numerous drawings of the structure of the parts, as well as of the appearance of the diseases.

"The subject of hernia is elucidated by immensely magnified and splendid paintings in oil, made from dissections for the purpose. This renders the ideas of the student at once clear and correct, as at the same time the disease is *imitated* on the dead subject by forming the tumour and sack, and the operation exhibited for its reduction. In a similar manner hemorrhoids, fistula in ano, hydrocele, scirrhous testicle, and diseases of the urethra, are all imitated on the subject, and explained by the aid of magnified paintings. *Lithotomy, amputation,* and, in short, every operation in surgery, is thus made plain to the class, by a multitude of ingenious contrivances, and at a very considerable expense. As you have seen the splendid collection of wax models, made by Professor Gibson himself, it is unnecessary to repeat to you that they are beautifully correct, and of great value to the student.

"There is one improvement of his, which deserves particular mention, as it is of a very singular and highly instructive character. This is, the frequent introduction of the *living* subject, on whom a great many operations are performed; such as washing out the stomach, as in cases of poisoning, by means of the gum elastic tube and syringe, the introduction of *Anel's* probe into the *puncta lacrymalia,* and of the catheter into the bladder, &c., all of which, as they are to be performed on the living subject, are only to be understood when performed in this way. The class are under considerable obligations to this indefatigable teacher, for after giving us an opportunity of seeing him operate on private patients, others from the Alms-House are frequently introduced to exhibit certain diseases, or their effects on the system.

"During the winter he delivers a course of clinical surgery, at the Alms-House, where patients are brought into the area of the

* Philadelphia Journal.

operating room, the peculiarities of their cases described, and operations performed when requisite. Sometimes they are brought in on their beds, which enables all the pupils to see, without subjecting the patient to the inconvenience of a crowd immediately around his bed. This plan is also his, and he deserves our gratitude for the steadiness of his exertions for our benefit. He has performed the operation of lithotomy, three times in the Alms-House within a few months, with entire success; and in all, we have seen upwards of *thirty* operations by him this winter The class in attendance at the Alms-House during this session, has been two hundred and fifty; heretofore it has never exceeded sixty. It is not difficult to foresee, that in succeeding winters this class will become very much larger."

On Leeches. By Dr. Rees Price.—Leeches should not be much handled prior to their application. If the weather be cold they are liable to become torpid, and should be warmed by breathing on them. Leeches may be applied by means of a wine or cupping glass. It is useful, in either case, to put a piece of stiff paper to the bottom of the glass, to which they are otherwise apt to retire; or, if they are required on a particular spot, a small glass tube, four or five inches long, and just large enough to admit the body of the leech, may be employed. If the leech remains torpid during the process of sangui-suction, a drop or two of cold water sprinkled on it will arouse it again into action. The best methods of suppressing hæmorrhage, which sometimes succeeds to their application, and is ocasionally very troublesome, when all the simple means, such as felt, starch, puff-ball, &c. have failed, are to apply the spirits of turpentine, or the muriated tincture of iron; or, in failure of these, to insert a piece of lunar caustic (the point being scraped very fine), into the puncture; or, lastly, a weak solution of tartarized antimony has lately been recommended as very efficacious. Dr. Price says, that, in order to preserve the leeches, they should be suffered to retain the blood, and merely be thrown into a jar of fresh water. In the course of a month or two, they will become firm and healthy, and able to perform their functions again; but, if the time cannot be spared for their recovery, he prefers what is called *stripping them*, to making them disgorge the blood by means of salt. It seems that if the blood is carefully squeezed from the leech, it is capable of resuming its functions immediately."

On Scorbutus attending Fractures. By J. Cloquet*.—Occasionally, during the process of consolidation of fractures, all the symptoms which characterize the last stage of scurvy develope themselves in the fractured limb, and arrest, for a long time, or even entirely prevent, the cure of the fracture. This troublesome complication is sometimes a purely local affection; at other times it first manifests itself in the fractured limb, and

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* Medico Chirurg. Rev. † Archieves Générales.

afterwards extends to the other organs of the body. The local scorbutus of which M. Cloquet treats, would appear to be produced by debilitating causes, acting directly on the fractured limb, or even in a general manner on the system. In order to prevent this affection, M. Cloquet considers it necessary, in fractures complicated with inflammation, to be very cautious as regards blood-letting; not to continue emollient applications longer than is absolutely necessary for allaying the inflammation, and after this period to dress the patient with linen, very dry and moderately tight. When the symptoms of local scorbutus have manifested themselves, the attention must be redoubled, tonics and stimulants administered, and, in short, all other means proper for obviating the scorbutus employed. It is also very useful, at each dressing, to leave the limb exposed to the air, and especially to the rays of the sun, for some time.

Acupuncturation in Tetanic Trismus. By F. Finch, of Greenwich*.—"In the course of the last month, a highly respectable neighbouring practitioner (Mr. Bromley, of Deptford,) informed me that he was attending a patient who had fallen from a considerable height, and had received several extensive lacerated wounds on various parts of the body and scalp, and that he despaired of his recovery, in consequence of trismus, &c. having taken place, and destroyed all power of deglutition. I intimated to Mr. Bromley that, if the case were mine, I should try the effect of acupuncturation, and was permitted to accompany him to the patient's house. The patient was in a most distressing situation, with a pulse of 130; the jaw completely locked; and, from the extreme rigidity of the muscles about the throat, he was incapable of swallowing the smallest quantity of fluid. Having obtained permission to employ the needles, I introduced one into the masseter muscle of the right side, and was much gratified to find that muscle, as well as the sterno-cleido-mastoideus, platysma myoides, and all the muscles of the neck and throat of that side, instantaneously relieved from their spasmodic contraction. Another needle was then introduced into the left masseter, and relief (though not to the same extent) was immediately afforded. Such was the effect of the operation, that before we left the room the patient took a large dose of tinct. opii and a cup of chocolate, although he had been unable to swallow any thing for some considerable time before. He is now perfectly recovered."

Buchanan's *Acoustic Surgery* †.—We have seldom need to

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* Medical Repository.

† An engraved Representation of the Anatomy of the human Ear, &c. with surgical Remarks on introducing the Probe and Catheter into the Eustachian Tube by the Nostril, &c. By T. Buchanan, C. M. &c. pp. 38, folio. Hull, 1823. Price 12s. 6d. boards.

animadvert on the size of books, but we think this one requires to be noted as the most unwieldy, ill got up book we have lately seen. The thirty-eight folio pages would have easily come into one of the sheets of this Journal; and the reader has accordingly, about sixpenny-worth of letter press for twelve and sixpence. The "Engraved Representation," as it is quaintly called, is a step below what has been already published of this kind, particularly a very lady-like one by J. H. Curtis, Esq. Aurist to the King, equally fit for the surgery and the boudoir. We shall give one extract from Mr. Buchanan's work.

On introducing the Probe and Catheter into the Eustachian Tube by the Nostril.—"Before you attempt to introduce the probe or catheter through the nostril into the Eustachian tnbe, it would be advisable to make the experiment on the dried preparation, and then, if possible, on the recent subject, when you could give it the necessary curvature preparatory to its introduction into the *living subject.*

"The experiment ought to be made on the same nostril and ear of the preparation or recent subject, as that on which you intend to operate. When the probe is just entering the mouth of the tube, the operator ought to mark it slightly in a line with the top of the nose, and from this mark measure off the length of the tube outwards, and mark it likewise. These measurements will be of great use when you operate.

"It would likewise be advisable to keep several probes ready curved and marked, some for the *right* and others for the *left* ear; and they should be of various assortments, to suit the age or size of the head of the patient. The great difficulty of introducing the probe into the Eustachian tube through the nostril, is the excessive irritability of the Schneiderian membrane with which it is lined.

"To overcome the disagreeable sensation produced by the introduction of foreign substances, it might be adviseable to inject tepid water into the nostril, and at the same time dip the probe into ol. amygd. warmed to the temperature of the blood. I have used this mode frequently with great success, causing little or no irritation to the patient.

"Having got the patient seated conveniently, introduce the probe into the nostril, and when you approach with the first mark towards the tip of the nose, cautiously endeavour to find the mouth of the tube, by directing the knob on the end of the probe outwards, and rather upwards, until it has entered the labia.

"Having entered the tube, observed the distance of the second mark, and proceed in the same manner until it is in a line with the tip of the nose, and feeling no resistance made to the probe, you may conclude that it has entered the tympanum.

"But beware of farther introduction; for by rashly pushing the probe into the tympanum, you might injure the mechanism of the

ossicula auditus, which besides putting your patient to great pain would throw discredit on the operation.

"If you wish to inject tepid water into the tympanum, provide a slender silver catheter, marked and curved similar to the probe, which should not exceed in diameter from the point to the first mark, that of the diameter of the knob of the probe.

"It should gradually increase in size from the first mark for about a quarter of an inch in length, to the thickness of a crow quill, and then be of an equal diameter to the end. This equal portion of the catheter to be made with a male screw on the outside, to fit a round flat piece of silver with a female screw in its center.

"This flat piece of silver, which has been called a frontlet, ought to have five or six holes in its edges, so that it may be secured in a proper position by means of a ribbon passed round the head and through two of the holes of the frontlet, the ends of the ribbon to be then brought backwards and tied behind; or an assistant might prevent the catheter from slipping into the tympanum, and at the same time secure the head of the patient during the operation."

Successful Ligature of the external Iliac Artery. By Dr. J. C. Warren, of Massachussetts*.—"In this case the aneurismal tumour was large, and extended upward into the cavity of the abdomen. When the muscles had been divided, and the abdominal cavity opened, the aneurism was seen rising so high as to conceal the iliac artery. From the anterior and inner part of the sac arose the epigastric, giving origin to the obturator artery, both of them greatly enlarged: the epigastric trunk being equal to the common size of the brachial. From the outer part of the sac arose the circumflexa ilii, which was also considerably enlarged. The epigastric interfered greatly with the necessary dissection of the great artery; the iliac was exposed higher than usual; and the ligature passed round it without difficulty. The event of this operation was favourable. The limb never lost its warmth, sensation, or motion. The patient was restrained to his bed with difficulty, until the ligature had separated: on the nineteenth day he was permitted to rise; on the following days he walked about, and afterwards rapidly recovered."

Ligature of the Subclavian Artery. By Mr. Wishart †.—"We have the satisfaction of announcing, that, in the Royal Infirmary of Edinburgh, the left subclavian artery was included in a ligature, by Mr. Wishart, on the 23d of August last, and hitherto there is every prospect of success. The subject of operation was a man of forty-seven years of age, by trade a porter. He had a large aneurismal tumour situate under the left pectoral muscle, and in close contact with the clavicle, attended with considerable pain and swelling of the corresponding arm. The time occupied in the operation, and

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* New England Journal.

† Edinburgh Medical and Surgical Journal.

in dressing the patient, was about twenty-one minutes. Three small arterial twigs were cut in the first incisions, which were immediately secured by ligature ; but there was no venous hemorrhage, and the patient did not lose above a table-spoonful of blood during the whole operation. The ligature, consisting of two threads, was placed round the subclavian artery, immediately after it had passed through the scalenus muscle, and close by the tubercle of the first rib. Two of the nerves, which go to form the axillary plexus, were distinctly exposed ; but neither the subclavian vein nor artery was seen. The artery lay deep in the wound ; but it was readily embraced with the ligature, by means of the common aneurismal needle. No mechanical contrivances were required to tighten the ligature, as this was easily effected by the fingers.

" As soon as the ligature was tightened, all pulsation in the tumour ceased. In the course of the day, the patient complained of numbness in the arm and hand ; but the heat of the limb never sunk below the natural temperature. The aneurism gradually diminished in size, and the pain and general swelling of the limb daily subsided.† On the 10th day after the operation, pulsation could be felt in the brachial artery ; on the 16th day, the ligature on the subclavian came away ; on the 17th, the pulse in the aneurismal arm was distinct at the wrist ; and this day, the 18th from the operation, every circumstance is favourable."

On the Actual Cautery in Sinuses and Fistulous Sores. By Dr. Smith, of Vermont, America.*—This seems to us a case of some interest. A labourer gave himself by accident a bad cut with his axe on the inside of the knee joint; and by bad medical treatment the joint was in the end left anchylosed, a deep-seated sinus with a fistulous opening remaining beneath the external muscles. Bandages and compresses were tried in vain ; and at length Dr. Smith resolved upon cutting down to the abscess ; but this was equally unsuccessful, as the wound speedily put on an unhealthy aspect.

" The poor man was now just where I had found him, except that he had lost much confidence in his surgeons, and was in utter despair of being relieved of his loathsome disease. The circumstances under which he became my patient were such, as made me extremely anxious to restore him to health. I happened about that time to meet with a case in the London Medico-Chirurgical Journal, in which the actual cautery had been employed. I immediately suggested the use of it to my patient, endeavouring to acquaint him with the manner in which it would operate, and related to him the case which I had read. He finally complied with my wishes, at the same time assuring me, that should this fail, it should be the last attempt. I procured an iron cylinder of three quarters of an inch in diameter, flattened at the end. This was

† Chapman's Journal.

heated to whiteness, and applied in two places over the sinus, and held upon the part for some seconds. It destroyed the skin, and excited an inflammatory blush upon the surface of the limb. From that day the aspect of the disease was changed, and in a week from that time, I had the satisfaction of dismissing the young man perfectly well, adhesion having taken place throughout the parietes of the sinus.

"I think I have never witnessed, in surgical practice, the application of a remedy, the result of which was more unequivocal or speedy. The event of the case has led me to inquire, whether we might not use the cautery, not only in diseases of a local nature, but also in general diseases, connected with or dependent upon local affections, where there is needed a remedy which will act with promptitude and energy. What, for instance, would be the effect of its application, along the spine, in tetanus?"

The actual cautery is, in ordinary cases, a terrific remedy to the patient, but is most certainly often a powerful and unique one, and cannot be more painful than the potential cautery by argentum nitratum or potassa cum calce.

Acupuncturation in Rheumatism. By Dr. Carter, of Canterbury*. —"Isaac Terry, who was troubled with sciatica, underwent this operation, and the relief which it afforded him, though unfortunately not permanent, was striking. The needles were passed May 9th—the pain was almost immediately removed, and stiffness only of the affected part remained. The patient walked four miles with ease. The pain, however, returned on the 15th. The operation was repeated once and again, and both times with marked relief. The relief, however, as I have before said, was not permanent; perhaps owing to the man's living exposed to cold and wet, and being obliged to work very hard. He afterwards, however, got nearly well by means of the warm bath and colchicum.

"Another patient, Mary Pattison, a middle-aged woman, had been long suffering from rheumatic pain of the arm and hand. A variety of remedies had been tried, but to no purpose. Acupuncture was here of decided efficacy. It certainly removed the pains from the parts to which it was first applied; and the patient, at her own earnest request, had the needles passed into the hand and fingers several times, and, if her statement is to be credited, the operation put the disease to flight. She was discharged some time back, and I have not heard of her since.

"I have employed acupuncture in several other cases; sometimes with considerable success, but I must confess, more often without benefit to the patient. Upon the whole, however, I am inclined to look upon it as a remedy worthy attention. Discrimination, as Mr. Churchill has said, is necessary in employing it, and it may be that I have occasionally resorted to it in cases to which

* Medical Repository.

it was not exactly applicable. When a novel remedy is brought forward, how prone we are to exhibit it without due discrimination!"

Taliacotian Operation. By Mr. Travers, of St. Thomas's Hospital.—This operation was performed about a month ago, upon a man aged 34 years, who had lost his nose within the last year from taking large quantities of mercury. Mr. Travers first removed the diseased parts, and pared the edges of the old nose, where it was intended to join the new one. The operator, with a pen and ink, sketched the outline of a nose upon the skin upon the patient's forehead, which he next proceeded to separate with his knife (in the lines he had drawn) from the surrounding parts, leaving, however, the piece at the bottom of the flap, between the eye-brows, undivided.

The piece of skin thus cut out, was *twisted* round, and laid over the scite of the old nose, so as to bring the inner *raw* surface in contact with it. Mr. Travers now exercised his ingenuity in modelling with this loose piece of integument the best nose he could, which was confined to the parts adjacent, by five stitches, and some strips of sticking plaster. Two small rolls of lint were put into the new nose to support its convexity, and *to form nostrils*; and a compress was put on the upper part, where the integument was twisted. The place in the forehead whence the new nose had been taken, was dressed with simple ointment, with sticking plaster, and left to nature to be filled up. Notwithstanding the operation was exceedingly well performed, some fears are at present entertained of its success, as one half of the new nose has lost its vitality; should it be ultimately necessary to make a new side to it, it is intended to cut it from the neighbouring cheek.

VI. PRACTICE OF PHYSIC.

We are sorry to say, that while progress is rapidly making in almost every department of the medical sciences, the practice of physic is nearly at a stand. We hear, indeed, of scientific practice, and empirical practice, but it is but seldom, we fear, that the distinction can be drawn; and while surgery is daily acquiring fixed scientific principles, physicians are either remaining stationary, or trying most empirically all sorts of new remedies, whose power can be made most manifest. The French pathologists, and their imitators in England, think they are making wonderful strides, when, in fact, they are more empirical in their dissections than ever were the most ignorant

prescribers, who knew nothing of the *post mortem* appearances of inflammation or morbid læsion. We press this most seriously upon our English readers, to prevent them being carried away from what we fear not to call practical empiricism established by the experience of centuries, and led, by the absurd Frenchified system now vigorously attempted to be palmed upon them, to follow a rash and experimental empiricism, which can only endanger their patients, and disgrace the profession. The most recent work which we have to notice in this department is

Dr. Shearman *on Chronic Debility and Indigestion**.—We had almost determined, when we saw the title of this work in the advertisement, not to take any notice of it, as it appeared to be a popular rather than a professional book. On looking into the work, however, we were surprised to find Dr. Shearman engaged in technical discussions concerning life, and the agents by which its powers are exhausted, conceived in a style which no popular reader could understand; and we must therefore conclude that he designed the book solely for the profession. At the very first glance, we have to complain that Dr. Shearman has not taken the trouble to make any obvious division of his subject, and we have neither contents nor index to guide us in discovering his sentiments on any of the multifarious topics which he has seen meet to introduce, without hunting over the book paragraph by paragraph. To read the work, we found to be rather irksome, from the constant occurrence of the term "life," or others equally indefinite, with which the pages are most plentifully bestrewed. We anticipated as much indeed from the preface, where he thinks it incumbent upon him to give his creed of spiritualism, and his disbelief of materialism, though as much out of place, as it appears to us in a work on debility, as Mr. Bingham's metaphysical essay on vision, in the introduction to his book on urinary diseases. We are sorry we cannot compliment Dr. Shearman either on the originality or the valuableness of his remarks; for we seldom have met with medical common-places, in a dress so little winning as the present. We shall take a single extract for a specimen of his manner, where the book chances to open.

"Among the medicines employed as sedatives, with a view of taking off the morbid contraction of the blood-vessels, perhaps no one is more entitled to commendation than sarsaparilla. When the

* Observations illustrative of the History and Treatment, of Chronic Debility, the prolific source of Indigestion, Spasmodic Diseases, and various Nervous Affections. By William Shearman. M.D., &c., pp. 225. 8vo. Underwood, London, 1824.

morbid contraction has been produced by the action of stimuli, as when mercury or guiacum has been long administered, the substance may be given with great advantage; and in those cases wherein the morbid state of the vessels arises from the influence of local disease, as in hectic fever from pulmonary affection, this medicine is productive of considerable benefit. Some difficulty has hitherto been experienced in obtaining its virtues in a sufficiently manageable state; but the preparations lately offered to the public appear to obviate this objection.

" It might at first view be supposed, that in cases of chronic debility, attended with morbid contraction of the blood-vessels, relaxant medicines, as antimony, &c., would be given with advantage, but this is by no means the case. The relaxant effects of this class are chiefly exerted upon the capillary vessels, and the balance of circulation is thereby thrown upon the surface; consequently the large internal vessels being emptied to a still greater degree, a larger expenditure of *living power* is requisite in contracting [*to contract.*] them upon their contents, and the debility is thus augmented. Page 185.

On the Uses of Iodine. By Dr. Gunther, of Cologne*.—" Iodine has for some time past been frequently employed by the medical practitioners of this place, particularly among the inhabitants of a mountainous district of country, situated a few miles from Cologne, where a considerable number of cases of goitre are met with. I have, along with others, tried its medical effects, particularly in the cases of two sisters, the one sixteen, the other eighteen years old; the former of whom was affected with a small tumour of the bronchocele kind, about the size of a pigeon's egg, situated in the neighbourhood of the thyroid gland; the other had a chronic tumour of much greater magnitude, situated on the left side of the neck: the swellings in both instances were hard, and quite free from pain. After the use of the iodine for a fortnight, considerable diminution in the size of the tumours was already observed. During that time the patients had only employed the Ungt. Hydriodin. made thus:—℞. Axung. porc. ℥jss. et Kali Hydriodinicum, ʒss. M. et fiat ungt. Of this ointment about the size of a hazel-nut was rubbed in on the swelling every evening; the iodine not being exhibited at all internally. At the present moment they still continue the use of the ointment; and I do not in the slightest degree doubt but that the tumours will be discussed without leaving the smallest trace of them since they are already of very inconsiderable size. During the employment of this application, the patients were not affected with any particular symptom, with the exception of the younger of the two, who about the sixth day after she began the application, complained of slight pains in the tumour; but these entirely disappeared in two days afterwards,

* Medicinish Chirurgische Zeitung.

the use of the ointment remaining uninterrupted. Since then they have not returned.

On Emetics, as counteracting Salivation. By Dr. Chapman, of Philadelphia*.—" It is a fact, with which we have long been acquainted, that active evacuations of the alimentary canal, are the very best means of awakening susceptibility to the impression of mercury. Even a small portion of ipecacuanha with calomel, so as scarcely to excite nausea, we have found sometimes to produce salivation when the latter article alone had proved ineffectual. The apparent contradiction which here occurs may, perhaps be reconciled on the established principle, that remedies in different states of the system are productive of opposite effects. We have for many years entertained the well weighed opinion, the result of much enquiry and observation, that the primary operation of mercury is on the stomach, and that, however administered, that organ, either by *direct* or *indirect* sympathy is put into a condition, of which the salivary glands, and all other parts of the system, participate. The present is not the occasion to bring forward the facts and experiments which warrant such a conclusion; but we shall hereafter do it, and we think, in a shape that cannot fail to silence all cavil and disputation on this point, among reasonable and unprejudiced men.

" During the last autumn, Dr. Richard Field, of Petersburgh, Virginia, in treating one of his patients for a profuse hemorrhage of the bowels, brought on by the inordinate action of calomel, with his favourite prescription, consisting of opium, ipecacuanha, and sugar of lead, gave the remedy in rather larger doses, and the stomach being extremely irritable, violent vomiting was excited. The patient at the time was labouring under a most profuse salivation, amounting even to sloughing of the mouth and fauces. The hemorrhage was soon suppressed, (an instance illustrative of the utility of vomiting in hemorrhage,) and with an almost simultaneous arrestation of the mercurial affection.

" Having a mind always susceptible of improvement, and of unbounded zeal in his profession, Dr. Field determined to profit by the hint thus given, and was induced to make a farther trial of the remedy in some other violent cases of salivation then under his care, and which had resisted the usual mode of treatment. The effects of the plan were not less beneficial than in the first instance.

" Not long after this, I happened to be in Petersburgh, and meeting with Dr. Field, he informed me of the decided advantage which he had derived from emetics under such circumstances, and assured me he had not been disappointed in a solitary instance, referring me to several other respectable practitioners of the town, who, he said, would bear ample testimony to the efficacy of the practice. I was then requested to inform my preceptor, who was once a pupil of Dr. Field, on my return to the country, of the cir-

* Philadelphia Journal.

cumstance, and which I accordingly did. Confiding in every thing coming from Dr. Field, my preceptor immediately made a very extensive trial of the remedy, and in a short time was enabled to corroborate all that had been previously said in favour of it.

"On the whole, from what I have myself seen of the utility of emetics in arresting inordinate salivation, and the gangrene resulting from it, I think I am warranted in pronouncing the practice a most important medical improvement."

On Tar as counteracting Salivation. By Dr. Kruger-Hausen, of Gostrow*.—This author has given an account of a man who, during a state of excessive salivation, attended with hæmorrhage from the gums, had employed the usual astringent gargles without benefit; who afterwards covered his tongue and inside of his mouth and fauces with tar, by means of a brush. He soon afterwards recovered, without any other remedy. Dr. K. has since employed the same means in several cases, with the effect of quickly removing this disagreeable consequence of medical treatment, without any inconvenience resulting from this new method."

Opium dissolved in Nitric Acid for Hectic Fever. By Dr. Harrison, of Kentucky †—"We have employed, says Dr. Harrison, opium dissolved in nitric acid, which is decidedly and eminently beneficial in hectic fever. One drachm of opium is dissolved in one ounce of nitric acid, in an open vessel, to allow the nitrous fumes, which are disengaged, to escape. According to the condition of the system, we give twenty, thirty, or forty drops, three times a day. When it manifests an action too predominantly narcotic, we diminish the quantity of the opium. But a sufficient quantity of opium must be dissolved, so as to calm the hectic irritation, at the same time the accompanying acid imparts strength. We have witnessed one case of entire recovery with this combination when nitric acid alone, mercury to a ptyalism, opium, &c. were tried with little benefit. Even in cases, where the prospect was clouded by the shadows of death, life was evidently prolonged, and the passage rendered more smooth and gentle, by its administration."

On Diabetes Mellitus. By Dr. Heineken, of Madeira‡.—The patient, in the case given by Dr. Heineken, was passing eight or ten quarts of urine daily, of a saccharine quality, and had the usual symptoms of diabetes. The following pills were ordered:—

℞ pulv. scammon. ℈j.
pulv. opii. ℈j.
hydr. submur. gr. v.
ant. tart. gr. ij.

To be made into twelve pills to be taken three times a day.

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* Revue Medical. † Philadelphia Journal. ‡ Medical Repository.

A warm bath every night—the chest, arms, and abdomen, to be rubbed well with sweet oil every morning. The food to be entirely animal. This treatment, with little variation, was continued from the 3d of June to the 17th of July, when it was noted that the patient perspires freely—that the urine is healthy—that the quantity is about three quarts daily. A nearly similar mode of treatment, however, was continued till the 8th of October, when he was considered as cured. The quantity of solid opium taken during the treatment was about six hundred grains; and during eight days of that time, he took fifteen grains daily.

Neuralgia, or Tic Douloureux, treated with Carbonate of Iron. By Dr. Crawford of Bath*.—"Dr. Crawford, of Bath, has communicated the particulars of two cases of neuralgia treated with the remedy in question—one in his own practice, the other in that of Dr. Davis, of Bath. The first case was that of a lady who became affected in the left side of her face at the age of 69 years. The disease was moderate at first, and the intervals between the paroxysms of considerabie extent; but after some time the disease became greatly exasperated, and the cessations from suffering of short duration. The complaint was subdued by the arsenical solution, and the patient remained free from suffering for two years. Then a slight relapse, and again relief for four years by the same remedy. At the end of this period the enemy renewed his attacks, but arsenic no longer availed. Dr. Crawford then commenced with carbonate of iron in scruple doses three times a day, gradually increasing the dose to a drachm. In three weeks from the commencement of this plan of treatment the disease gave way, and has not yet returned."

"Dr. Davis's patient was also a female, 65 years of age, affected with the diseases in the right side of the face. She was cured by the carbonate of iron in a fortnight—two scruples night and morning.

"Mr. Thomson, of Sloane-street, has communicated to Mr. Hutchinson the particulars of some cases which are in favour of the remedy. We sincerely hope it may retain the reputation it has already acquired."

Neuralgia, treated with the Oil of Turpentine. By M. Sedillot†.—M. Sedillot, in the name of M. Laroche, read a Memoir on the good effects of the oil of turpentine in *sciatic neuralgia*. The author administered this substance in the dose of a drachm to an ounce of syrup. In several individuals, the cure was speedy and complete, whilst in others a relapse took place; in all, however, relief was experienced. In some, a copious perspiration preceded the appearance of neuralgia.

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* Medico-Chirurgical Review. † Revue Medicale.

On the Use of Prussic Acid. By Dr. Macleod*:—"One of the most distressing symptoms attending dyspepsia is uneasiness in the chest, with occasional fits of palpitation, sometimes assuming the more severe character of angina pectoris. On the other hand, in primary organic diseases of the heart, we very frequently find many of the most troublesome symptoms of dyspepsia, particularly flatulence; and such cases, although not altogether dependent on the state of the stomach, are nevertheless much aggravated by its derangement. Now, in such instances of morbid action of the heart brought on by dyspepsia, or of dyspepsia sympathetic of organic disease of the heart, I am inclined to think that much benefit is to be obtained from the employment of prussic acid. That, in the latter class of cases it can for a moment retard the progress of organic mischief, I would by no means wish to imply, but, after a fair trial, I have been led to believe that it may palliate the sufferings of the patient, although it cannot cure the disease. In a case to which I alluded on a former occasion, the relief afforded was of the most unequivocal kind, although other remedies had failed to produce even temporary benefit. This patient died soon after, and the heart was found to be very considerably enlarged, and extremely soft.

"A short time after the occurrence of this case, a patient applied to me, who laboured under well-marked symptoms of enlargement of the heart, attended with considerable pain and palpitation of this organ. He was dyspeptic. I prescribed ten drops of prussic acid in a five-ounce mixture, of which he began by taking two table-spoonfuls three times a-day, gradually increased till he took the whole of the mixture in twenty-four hours. After a few days the symptoms began to yield, and he became much more comfortable. Having persevered in his medicine for about a fortnight, he discontinued his attendance, and I saw nothing of him for several months. The only perceptible effect from the medicine was the improvement in his general state of health, and diminution of the violence of the action of the heart: he was less subject to fits of palpitation, but I could not perceive that, in the intervals, the number of pulsations (averaging from seventy-five to eighty-five) was diminished. After some months, this patient returned with symptoms analagous to those above described, and, without waiting to be examined, asked for *the medicine*: he took it a second time, with similar benefit. From this period, the intervals during which he was able to omit the use of the prussic acid gradually diminished in proportion as the organic derangement increased: notwithstanding this, however, it continued to afford relief until within a few weeks of his death, which did not take place for two years from the time of his falling under my notice. He had tried a variety of medicines, without obtaining any benefit, before he had recourse to the prussic acid; and, after this failed to afford relief, no other remedy

* Medical and Physical Journal

was of the slightest avail. An opportunity presented itself of examining the body of this patient, who was under thirty-five at the time of his death: the only appearances worthy of note were great enlargement of the heart, with ossification of the mitral valves, and of those at the root of the aorta.

"This is the second case in which I have seen prussic acid afford relief in derangement of the functions of the heart, which has been proved by the dissection to have originated in organic disease. I have likewise given it in many cases of palpitation, and other unpleasant symptoms referred to the region of the heart, where these have appeared to depend on dyspepsia, and generally with a considerable advantage."

Case of Diabetes. By Dr. Carter*.—This case is important as tending to confirm the experiments of Dr. Marsh. Dr. Carter's patient was aged 33, a day labourer. The symptoms of the case were not very aggravated, the liquid egesta never amounting to more than nine pints in twenty-four hours, and their excess over the ingesta never more than four pints a-day.

"About the middle of March he caught cold, and the quantity of urine was again greatly increased. On the 4th of April the diabetes suddenly ceased, without any assignable cause, and distressing strangury ensued. This soon yielded to tinct. ferri muriatis, and an opium pill at night, and the urine became again sweet and too copious. About this time the third volume of the Dublin Hospital Reports fell into my hands, and Dr. Marsh's paper on diabetes of course attracted my attention forcibly. His recommendation of opium is not new †: it was his statement respecting the warm bath, and the exciting of profuse perspiration by hard labour, that attracted me. I determined to give both a trial in the present case. The warm bath, both simply and with tinct. opii, caused excessive sickness and languor, and the patient could not be persuaded to continue it. Hard work, aided by warm clothing, and a scruple of Dover's powder at night, entirely removed the disease. At the beginning of June he was *quite well*, and left off medicine, and on the 13th he was discharged.

"I feel perfectly satisfied that Smith was free from diabetes when he left the hospital, and I cannot but ascribe the removal of the complaint to the profuse perspiration induced chiefly by hard labour and warm clothing. Since his dismissal the disease has, I understand, returned, owing, I dare say, to irregular living; but the man has not applied to me. This does no discredit to the treatment which succeeded while he was under my observation, and should by no means shake our confidence in the plan proposed in Dr. Marsh's excellent paper."

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* Medical Repository.

† "See cases recorded in Vol. IV. of the Medical Transactions of the London College of Physicians, by Dr. Warren."

Tetanus, treated with Oil of Turpentine. By B. Hutchinson*.—Mr. Hutchinson has stated a case of tetanus occurring without any evident cause, in a man long afflicted with epileptic attacks. He was a prisoner in the Nottinghamshire House of Correction. Mr. Hutchinson finding, on his visit one morning, that the patient presented most of the usual phenomena of tetanus, he abstracted thirty ounces of blood, and exhibited fifteen grains of calomel and two grains of opium. Next was administered a brisk purgative enema, containing one ounce of the oleum terebinthinæ, while a blister was applied to the back. The enema taking no effect, half an ounce of turpentine was ordered by the mouth every two hours. Next morning our author was agreeably surprised to find that the patient could open his mouth, and that the whole of the tetanic symptoms were dispersed. He had taken, in all, two ounces of the turpentine, which freely evacuated his bowels. We would hint our suspicion that the case was not one of real tetanus, from the great facility with which the symptoms gave way. However this may be, we have nothing to object to the mode of treatment employed.

VII. MIDWIFERY.

There is but little new in this department. Dr. Power has republished his Treatise on Midwifery, developing *new principles*, namely, stroking and similar handlements (we are forced to coin a term), applied to the abdomen during parturition. In a former series of this Journal, we advised Dr. Power to lay aside this foolery, and keep to the beaten path—"but he would none of our counsel."—Let him take the consequences.

Dr. Conquest has published a third edition of his useful and successful little work, the Outlines of Midwifery †, to which we observe he has made several additions, and amongst others an arranged list of books and papers on midwifery, which may be consulted or studied with advantage. We must say, however, that this list does not appear to be drawn up with much discrimination.

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* Medical and Physical Journal.

† Outlines of Midwifery, developing its Principles and Practice, intended as a text book for Students, and a book of reference for Junior Practitioners. By J. T. Conquest, M.D. F.L.S. pp. 224. 12mo. plates. Anderson, London, 1823.

We observe that he has taken the advice we tendered to him in our first series, by leaving out his very objectionable personalities and insinuations against his brother practitioners. But the "*mournful* series of portraits," as he cantingly expresses himself, still stands, though without his former ill-natured addition of—"every one of which is drawn from a living character." As we think there are many important hints in this same "mournful series," we shall here extract it for our readers:—

"Within the whole range of obstetric science, there is nothing which so much distinguishes the judicious practitioner from the man who disgraces medicine, as the management of *protracted labours*. One man, by incessant meddling, produces rigidity of parts, and even inflames the os uteri, so that his patient through his folly shall suffer from a most painful and protracted labour.

"Another officiously interferes with the beautifully simple and admirably adapted process of nature; and presumes, that by rupturing the membranes as soon as he can detect them, or by using his lever upon lever principles, by which many women are rendered wretched for life, he shall accelerate parturition.

"A third urges his patient to be constantly taking stimulants, such as wine and spirits, or to employ voluntary exertions, by desiring her to hold in her breath and force down; whilst the os uteri is not dilated half enough to permit the head to pass through, and the consequence is, that the woman becomes so exhausted by useless exertions, that she at last has not power enough to expel the child, and instruments must be had recourse to.

"Another practitioner allows the head to remain for hours and days of laborious parturition, in a position which will never permit it to pass through the pelvis, until the mother is worn out by fruitless efforts; though the mal-position might have been rectified at the commencement of labour without difficulty.

"A fifth is altogether unconcerned about the condition of the parts, until the head has been so long and firmly wedged in the superior aperture of the pelvis, that mortification follows.

"To complete this mournful series of portraits, *another*, instead of waiting for uterine action to throw off the placenta, will pull at the funis, until the uterus is inverted, or formidable hemorrhage follows; and when, as a consequence of his meddling, the uterus is filled with coagulated blood, and it strives to empty itself by strong contractions, which are called after-pains, he will strive to counteract this salutary operation, by exhibiting large doses of opium to quiet these pains, which are intended to repair the mischief he had himself produced.

"These sketches have not one shade too deep, and they are but a sample of those practical evils, which are of almost every day occurrence."—pp. 81-2.

Two Cases of Division of the Symphysis Pubis. By Dr. MANCHINI, of Naples.*—[Communicated by Dr. R. Harrison, of Argyll-street.] "My friend, Dr. Manchini, professor of anatomy at Naples, has recently divided the symphysis pubis in two cases, in which it had been determined, by previous consultations, that the delivery could not be effected by the natural process. In both instances the children were born alive, and did well, and the mothers recovered. After the operation, which consisted in a simple division of the symphysis, the patients were put into warm baths, and the further separation of the bones and dilatation of the passages left to the efforts of nature. I know not exactly what time was necessary for this purpose in the first case; but, in the second, the delivery was accomplished eight hours after the operation, when the divided bones were found to have separated an inch and a half from each other. The parietal bones of the child's head overlapped each other very much, and the whole cranium was brought into the form of a cone, from the pressure it had sustained in effecting a passage through the openings, which were still narrow. This deformity afterwards disappeared, and both mother and child did well in every respect.

"In the first case, no re-union of the divided parts took place, owing to their not having been brought into apposition after the delivery; from which circumstance, the power of walking has not been perfectly recovered, but is performed in a *straddling* manner. In the second case, the parts were brought together after the accouchement, and retained in their natural situation by means of rollers properly applied: the bones united, and no inconvenience of any kind was afterwards experienced."

Treatment of Lacerated Perineum.—By Dr. CAMPBELL, of Edinburgh†.—In this injury "Two modes of treatment have been recommended—first, to bring the lacerated surfaces into apposition, merely by securing the limbs together; and, secondly, to place two or three stitches in the perineum, and secure the limbs. A practitioner, who is at all acquainted with the changes which the external parts undergo, owing to their enormous distention during the expulsion of the fœtus, would scarcely think of recommending the perineum to be stitched; for the great relaxation consequent on such distention, should present to him a prospect of the parts cohering by merely bringing them into contact, without adding to the sufferings of the patient by an unnecessary operation, and wounding her feelings by an indelicate exposure. From the result of several cases, I am justified in saying, that, in recent accidents of this kind, sutures are not required. The removal of the urine and fæces are points which require particular care and management. The former should be drawn off by the catheter at regular

* Med. and Phys. Journal

† Edinburgh Medical and Surgical Journal.

intervals, and the latter removed, by some contrivance which will not require much exertion on the part of the patient. With regard to the state of the bowels, it was at one time the opinion of some, that it would be advisable to induce constipation, in order to prevent the patient from being obliged to exert herself; but experience proved the absurdity of this notion, because the efforts required for the expulsion of indurated fæces were found to derange the process of adhesion, and prevent reunion. On these grounds, therefore, our practice will be much more successful by keeping the bowels, if any thing, rather open; but by no means to occasion an actual purging, for fear of producing too much action and irritation of the parts which are the seat of injury. I have found, that in the cases under consideration, the free use of the subacid fruits will keep the bowels in a proper state. When laxatives are required, they should be exhibited in limited doses. To favour the approximation of the parts, the patient should be recommended to lie as much as possible on her side in bed.

"In chronic examples, on the other hand, of which I have had little experience, I do not think that stitches can be always dispensed with, however painful and indelicate the practice may be to the patient. With one exception, however, I have always succeeded in causing a reunion, by securing the limbs above the knees, by means of a common roller; keeping the wound clean, by changing the cloths applied to the external parts sufficiently often; using ablutions daily, with an astringent lotion in a tepid state, such as formerly recommended; and placing a piece of dry lint over the wound after each ablution.

"In chronic cases, where an attempt is made to obtain a reunion of the divided parts, the callous margins must be pared, or rendered raw by the application of caustic; and as they have had time to contract or recover their tone, some expedient must be resorted to, in order to bring them together, on which account I consider the use of sutures indispensable. An operation similar to that performed in cases of hare-lip has also been advised in the injuries embraced by the present remarks; and the ingenious Smellie put it to the test of experiment in one instance, but without success. I still think, however, that this expedient merits further trial: for the failure of a solitary instance does not justify us in rejecting the practice altogether."

VIII. MEDICAL JURISPRUDENCE.

The most prominent circumstance in this department, is the republication of Dr. Gordon Smith's Forensic Medicine, a work which forms both a book of reference for the library, and a convenient text book for the student. Dr. Smith has not, we per-

ceive, lumbered his useful volume with prosing law cases of no interest, except adding to the bulk, unwieldiness, and expense of his book, as is notoriously the case with the work of Dr. Paris, which is the most towering specimen of book-making we have lately seen. We intend to make a more extended article on Dr. Smith's work in our next number.

On certain Phenomena in Persons Executed. By M. Guyon *.— "M. Guyon, Surgeon-Major, at Martinique, the intrepid experimenter on yellow fever, opened the bodies of 21 criminals, 14 of whom had been hung, and seven decapitated, with a view of ascertaining the truth, regarding the disputed subject of emission. Being placed near them at the place of execution, he observed the penis of those condemned to be hung, become erect at the instant of strangulation, and immediately afterwards five of them made urine abundantly. An hour after execution, he found in nine of them the penis in a state of semi-erection, and its canal filled with a kind of matter, with which the shirt was too profusely impregnated, to allow it to be supposed that it came from any other organ than the prostate. It is proper to observe that those persons were negroes, and habited in white dresses. On dissection, the blood-vessels of the head contained little more than usual; those of the lungs were gorged; the right auricle almost empty; the alimentary canal was distended with gas, especially the colon; the cervical vertebræ were uninjured."

IX. CHEMISTRY.

Several works on this science have lately appeared, but few of them of any high rank. We observe, Mr. Dunglisson has announced a work on Organic Chemistry, founded on the treatise of Gmelin; the subject is worthy of every attention, but is still in its infancy; and there appears to be, at least in this country, very little interest attached to the study. We hope that this new work, from an acknowledged able writer, may prove a stimulus to investigation; though we much fear it will share the still-born fate of the productions of Berzelius, Johnson, and others, on a similar plan, which have been praised by some, but read or purchased by few. In a former series, in noticing Mr. Dunglisson's well written book on Moxa, we expressed a wish to meet with him soon again, on some more popular subject. We fear, however, that Gmelin will be still less so than Larrey.

The indefatigable Sir Richard Phillips has just published a

* Revue Médicale.

Dictionary of Chemistry and Geology, with the name of James Mitchell on the title page. It has all the appearance, however, of Colin Mackenzie's One thousand Experiments, and is probably in part, if not all, by the same hand. This is saying quite enough. Nobody, who knows any thing of Sir Richard's book-manufactory, requires to be put on their guard against being taken in with a catching title page, followed by a mass of ill-arranged, inaccurate, and contradictory extracts, taken from all sorts of books without discrimination, for the sole purpose of making a show and obtaining a ready sale.

The next work we shall notice in this branch, is Gurney's Lectures on Chemistry, delivered at the Surrey Institution. The course was a popular one, and if the most unscientific extravagance of speculation, aided by a proper proportion of legerdemain experiment, is calculated to be popular, Mr. Goldsworthy Gurney must have risen high in popularity from these lectures. His style of composition is of the same description as his science, quite unscholar-like and bad. He seems to have a strong hankering after the Platonic, or rather Pythagorean doctrine of the harmony of numbers. This, we understand, he carried so far as to propose introducing it into the practice of medicine, founded upon cases which he had treated according to the aforesaid harmonical properties of numbers! We cannot find this piece of folly in the book before us, though there is enough of the same kind equally absurd; but we have it on the best authority, that it was publicly stated in the lectures, and of course a legitimate subject of remark. We gladly escape from this book of dreams to something more tangible.

On the Condensation of the Gases. By Mr. Faraday.—The discovery of the condensation of the gases by Mr. Faraday, of the Royal Institution, is highly worthy of notice, both from its singularity and from the results to which it may lead.

Sulphurous Acid, he found to be a very limpid, colourless fluid, and remaining so at 0° Fahr. When a sealed tube containing it was opened, part of it evaporated rapidly, cooling by its evaporation the other part, which however also dissipated in vapours, emitting the odour of sulphurous acid, and leaving the tube quite dry. A piece of ice dropped in the fluid acid made it boil, from the heat extricated by their union.

Sulphuretted Hydrogen is also a colourless and very limpid fluid. When exposed to the air, it immediately rushed into vapour, the pressure of which seemed nearly equal to that of 17 atmospheres at the temperature of 50°. At 0° the acid continues in the fluid state.

Carbonic Acid is a limpid, colourless matter, extremely fluid, and distils readily and rapidly at the difference of temperature between 32° and 0°. It remains liquid at the greatest cold to which it has been subjected. Its vapours exert a pressure of 36 atmospheres at 32°.

Euclorine, is a very fluid, transparent, substance of a deep yellow colour, which, when exposed to the air, instantly passes off in vapour, causing the tube containing it to burst with considerable violence.

Nitrious Oxide is a very limpid, colourless fluid, and so volatile that the warmth of the hand makes it easily pass into vapour, which is again rapidly condensed by the application of a mixture of ice and salt. It boils by the difference of temperature between 50° and 0°. It remains fluid at 10°; when a tube containing it is opened at one end, it immediately rushes out in the form of vapour, the pressure of which is equal to about fifty atmospheres, at 45°.

Cyanogen is a limpid, colourless fluid, remaining so at 3°. When the tube in which it was prepared was opened, the expansion within did not appear to be very great, and the liquid passed with comparative slowness into vapour, but producing great cold. The fluid acid does not at first mix with water, but floats on it.

Ammonia.—Chloride, or muriate of silver, possesses the property of absorbing a large quantity of ammonical gas, which it gives off when heated to about 100°. When a portion of this compound was put into a bent tube, afterwards hermetically sealed, and was heated, it gave off the alkali, which condensed in the opposite limb, kept cold by ice. Liquid ammonia, as thus prepared, is transparent and colourless; but, as the chloride cools, it immediately passes off in vapour and combines with it, producing a curious combination of effects. The chloride, by absorption of the vapour, has its temperature elevated nearly to 100°; while at the distance of a few inches, considerable cold is produced by the evaporation of the ammonia.

Muriatic Acid is a colourless fluid, passing off in vapour on exposure to air, the pressure of which is equal to nearly forty atmospheres at the temperature of 50°.

New Combination of Antimony and Mercury. By Dr. Miccoli.*—"With a view of giving more energy to the action of mercury on the animal economy, the Author conceived the idea of mixing with an ointment, made of an ounce of mercury, and two drachms of lard, five scruples of the pulvis antimonialis, finely powdered.

* Annali universali di Medicina de Milano.

This ointment does not produce salivation, and is extolled by Dr. Miccoli, as a remedy in a vast variety of diseases, whether from syphilis or not, and, amongst others, in hydrophobia. Mercury, killed by the same powder, and administered in doses of 10 or 12 grains, has a similar effect, yet not so secure from salivation. By substituting the oil of the seeds of the datura stramonium for the lard, used in the ointment, and a proper quantity of wax, a topical application is procured, which is also highly praised by our author."

Those remedies may deserve a trial.

Uréa in the Blood. By MM. Prevost and Dumas *.—The kidneys of various animals were removed, and the blood subjected to careful analyses, when a considerable portion of uréa was discovered, which differed but very slightly from that found in the urine of some animals. The physiologists (say the authors,) who may be curious to satisfy themselves of the truth of the facts mentioned in this Memoire, will not experience much difficulty. Five ounces of the blood of a dog, which has lived without kidneys for only two days, afford more than twenty grains of uréa; and two ounces of the blood of a cat, under the same circumstances, give more than ten grains. These quantities are perfectly appreciable by the least experienced chemists. We would not advise them to try on rabbits, because they do not resist the operation so well. M. Vauquelin, whose name ranks so high as a chemist, repeated these investigations along with M. Segalas, and concludes from them that uréa acts as a very active diuretic.

Method of making Prussic Acid. By M. Pessina†.—"This Author gives the following process for the formation of the prussic acid, which he states to be by much the most economical hitherto discovered:—Eighteen parts of the prussiate of iron and potass are to be reduced to fine powder, and introduced into the bulb of a small tubulated retort of glass, to which a small balloon, likewise tubulated, is then to be attached. A conducting tube dips into a flask containing a small quantity of distilled water. A *cold* mixture, of nine parts of sulphuric acid with twelve of water, is next introduced into the retort, which is closed, and the whole left for twelve hours; the balloon, and the neck of the retort, being kept cool with ice and evaporating cloths. A gentle heat is then applied, and continued until the striæ in the neck of the retort become more rare, and a blue substance rises, as if it would pass into the receiver. The heat is now to be withdrawn, and the apparatus allowed to cool; the contents of the receiver being preserved in a proper vessel. The prussic acid thus obtained is stated to be pure, and the specific gravity about 0.898.

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* Annales de Chimie.—Giornale di Fisica.

† Annales de Chimie, &c.

X. MATERIA MEDICA AND PHARMACY.

In this department we have to remark, that more activity seems to prevail in France than in this country, though the great demand for pharmaceutical works here, shows that we are also much alive to improvement. We have now before us two excellent little French works, the "Formulaire de Montpellier," and the "Formulaire des Hospitaux civils de Paris." Among our own publications we have the Pupil's Pharmacopœia, by W. Maugham, which is one of those very objectionable short cuts to learning that the scanty education of young men renders necessary, to help them, at a halting pace, through the easy Latin of the Pharmacopœia. Those who require such an A. B. C. book as this, had much better go to school than thrust themselves prematurely, like "unlicked cubs," into a profession which they must disgrace by their ignorance. The work, however, is respectable enough of its kind: it is the necessity for such a work which we deplore.

We observe a "Pocket Conspectus of Prescriptions in Medicine, Surgery, and Midwifery" has been announced. We hope the author will not, in a work calculated, if well executed, to be so useful, pander to the ignorance of half educated boys, by putting the formulæ into English; which, by the way, Dr. Thomas has recently done in his stupid and contradictory work, "The Practice of Physic."

We have the same circumstance to reprehend in a little work of great interest and merit, the translation, with notes, of M. Magendie's Formulary for the preparation of New Remedies, by C. T. Haden *, as he has given all the formulæ in English; possibly from his extravagant love of every thing French, the original formulæ being in the vernacular tongue. In our former series we have repeatedly given large extracts from the original work of Magendie, and also from the papers of other inquirers on the subject; and in our present number we have analysed an excellent paper by Dr. Elliotson, on one of the most interesting of the new remedies, the sulphate of quinine. We shall only therefore make the following extract from Mr. Haden's book:

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* Formulary for the Preparation and Mode of Employing several New Remedies, namely, the Nux Vomica, Morphine, Prussic Acid, Strychnine, Veratrine, the active Principle of the Cinchonas, Emetine, Iodine, &c.; with an Introduction and copious Notes. By Charles T. Haden, surgeon, &c. [Translated from the French.] pp. 110, 8vo. Underwood, London, 1823.

Preparation of Veratrine.—"They repeatedly digested the seeds of the *veratrum sabadilla* in boiling alcohol. These tinctures, filtrated whilst almost boiling, deposited, on cooling, whitish flakes of wax. They redigested the matter which remained dissolved, after evaporating it to the consistence of an extract, in cold water: a small quantity of fatty matter now remained on the filter. The solution was slowly evaporated, and it formed an orange yellow precipitate, which possessed the characteristics of the colouring matter found in almost all the woody vegetables. On adding a solution of acetate of lead to the liquor, which was still deeply coloured, a new and very abundant yellow precipitate was immediately formed, which was separated by means of the filter. The liquor, now nearly colourless, still contained, amongst other substances, the acetate of lead, which had been added in excess: a current of hydrosulphuric acid was used to separate the lead. The liquor was then filtrated and concentrated by evaporation, was treated by magnesia, and again filtrated. The magnesian precipitate was digested in boiling alcohol. The alcoholic liquors gave, on evaporation, a pulverulent substance, which was extremely acrid, and possessed all the properties of the alkalis. This substance was at first yellowish; but, by solutions in alcohol, and subsequent precipitations, caused by pouring water into the alcoholic solutions, it was obtained in the form of a very white and perfectly inodorous powder."

Vegetable Alkali from Rhubarb. By M. Nani, of Milan*.—Six ounces of rhubarb, in powder, were boiled for two hours in eight pints of common water, with four drachms of sulphuric acid; this was filtered, pressed, and the residuum reboiled with six ounces of water and two drachms of sulphuric acid; the fluid being again separated, the residuum weighed but two ounces. The united infusions were mixed by degrees with three ounces of quicklime, and from being yellow they became of a blood-red colour; after standing for a day, the precipitate was filtered out, dried in the sun, and weighed six ounces. It was then digested at a high heat, with four pounds of alcohol S.G. .837 for two hours, filtered, and again digested with two pounds more of alcohol, which, when separated by a second filtration, was added to the first. Being put into a retort, five pounds of the alcohol were distilled off, and the rest of the liquor carefully evaporated to dryness. The residuum weighed two drachms, was of a red brown colour, with brilliant points throughout. Its taste was sharp and styptic. It was soluble in water, and its odour like that of rhubarb. This preparation is recommended in pharmacy as being of constant quality, of convenient solubility in water, and deprived of its inert and ligneous matter; one or two grains are said to be sufficient for a dose."

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* Journal de Pharmacie.

XI. BOTANY.

Great activity still prevails in this delightful science, though the minute discoveries daily making are not much fitted for the pages of a journal like this. Mr. R. K. Greville is going on with great spirit in his admirable delineations of the Scottish cryptogamia. We regret to see him referring so often to so very clumsy a work as Gray's, which he surely cannot in any seriousness hold to be an authority.

Metamorphosis of Vegetables into Animals. By M. Gaillon*.—"It has been ascertained by several Naturalists, that a great number of the *confervæ* are disorganised during the summer, and that the greenish globules, which are seen in their interior, become animacule, which swim for a certain period in water, are susceptible of irritation on being touched, &c. &c.; and at the end, reunite themselves to form new *confervæ*. M. Gaillon, in his new Memoir, presented to the Institute of France, has made observations, which fully confirm those previously made on this singular order of beings, which seem to destroy all traces of the distinction so feebly marked between the animal and vegetable creation. The species, to which he has applied his researches, is the genus ceramion of Decandolle. Dillwyn has described them under the name of conferva comoides. They cover the mud on the sea coast at Dieppe. The corpucles, which are of a greenish colour, M. Gaillon has observed, leave the filaments of the conferva comoides at frequent intervals, and assuming the form sometimes of an oval, sometimes of a parallelogram, move about slowly or rapidly, and change their direction, like the cyclades and other animals of that class. He has even forced these corpuscles from the filaments before their time, and has observed the same phenomena. M. Mertens, a celebrated botanist of Germany, has made the same observations. Last year he exhibited, to several *savans*, the conferva mutabilis; on the 3d of August, in the state of a plant; on the 5th, disorganised, in the form of molecules, possessing the power of locomotion; reunited on the 6th, in the form of simple articulation; and, on the 11th, constituted again, in their primitive form."

XII. ZOOLOGY.

This branch of science has lately been rather in a languid state. The excellent work of Dr. Fleming, of Flisk, has had but little power to revive it. We hope that the new Journal of Zoology, announced for speedy publication, will attract more

* Revue Medicale.

attention to it. We are quite anxious also for the appearance of Kirby and Spence's concluding volumes of their Entomology, which has now been announced as nearly ready for the last five years.

On the Generation of Worms. By M. Leo.—This Author has lately confirmed what Swammerdam had remarked with regard to earth worms—that they multiply by eggs, which are found in spring, and which allow, not only the enclosed young, but also the circulation of its blood to be seen. These observations have likewise been confirmed by Rudolphi. According to him, what some naturalists have found in the body of worms, and which they have considered as the young, is merely an *intestinal* animal, which he has seen not only in the worms themselves, but also in their eggs.

XIII. MISCELLANEOUS.

CLAPHAM RETREAT,

For the Medical Treatment of the Insane and Imbecile.

Through the kindness of Dr. Burrows, the visiting physician, we had an opportunity of seeing the excellent arrangements of this establishment soon after it was opened, and we cordially unite with our brother journalists in strongly recommending it to the notice of the profession, as one of the best managed institutions of the kind we have ever seen. It is extremely commodious in its internal arrangements, and out of doors there are extensive grounds and gardens for walking and recreation, and a bowling green, &c. for amusement. The house commands from every window a wide field of view all around the metropolis, one of the most advantageous circumstances, as we conceive, for contributing by its cheerfulness to the recovery of the insane. This is even taken ingenious advantage of in the inclosure for the more outrageous, a mound being raised in its centre, which commands a good view of the grounds. The same principle is acted upon within doors, in allowing the inmates cards, billiards, books, &c. and, not the least important of all is, the care taken (with proper caution of course) to afford the consolations of religion, and always according to the peculiar creeds of the parties. We need only add, that the whole is under the care of Dr. Burrows, whose work on Insanity is so well known to the profession that it requires not our praise. In a word, we do not know an establishment of this kind that affords a greater hope of cure to the insane, or a more comfortable retreat for those deemed incurable, and we therefore hope it will be extensively patronized.

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*** Our Subscribers will perceive, from both this Number and the last, that we still maintain our superiority in the Foreign Department, which we shall endeavour to continue.

BOOKS RECEIVED BY THE EDITOR FOR REVIEW.

☞ *Only such Works as are sent by the Authors or Publishers, free of Expense, can be entered on this List.*

Elements of Medical Jurisprudence. By Theodoric Romeyn Beck, M.D., Professor of the Institutes of Medicine, and Lecturer on Medical Jurisprudence, in the College of Physicians and Surgeons in the Western District of the State of New-York. 2 vols. 8vo. Albany, 1823.

Essay on the Effects of Iodine on the Human Constitution; with Practical Observations on its Use in the Cure of Bronchocele, Scrofula, and Tuberculous Diseases of the Chest and Abdomen. By W. Gairdner, M.D. pp. 64. 8vo. London, 1824.

An Essay on an Improved Method of Cutting for Urinary Calculi, or the posterior operation of Lithotomy. By W. W. Sleigh, M.R.C.S., and Lecturer on Anatomy. pp. 104. 8vo. London, 1824. Anderson.

The Principles of Forensic Medicine, systematically arranged, and applied to British Practice. By John Gordon Smith, M.D., Lecturer on Political Medicine. *Second Edition*, greatly enlarged.. 8vo., pp. 579. Price 16s. 6d. Underwood, 1824.

An Essay on Apparitions, in which their appearance is accounted for by Causes wholly independent of preternatural agency. By John Alderson, M.D., Senior Physician to the Hull General Infirmary, &c. 8vo. pp. 53. New Edition, revised and corrected.

Pathological Observations on the Rotated or Contorted Spine, commonly called Curvature, deduced from practice; in which are shown the Causes that produce it; the Reason of its being mistaken for an Incurvation of the Spinal Column; and the Means best adapted to its Prevention and Cure; agreeably to the Principles laid down, and the Author's experience. By Andrew Dods, M.D., late of Edinburgh, and Surgeon of the Royal Navy. pp. 239. 8vo. London, 1824.

Observations on Prison Discipline, exemplified by the Tread-Mill and Dietary adopted in the Nottinghamshire House of Correction at Southwell. By Benjamin Hutchinson, Surgeon to the Establishment. 8vo. Newark, 1823.

Practical Observations on the Removal of every Species and Variety of Cataract by Hyalonyxis, or the Vitreous Operation, illustrated by Cases; with critical and general Remarks on the other Methods employed. By John Bowen, M.D., Fellow of the Royal College of Physicians of Edinburgh, Member of the Royal College of Surgeons of London, &c. &c. 8vo., pp. 120. Price 6s. Callow and Wilson, London, Jan. 1824.

The American Medical Recorder of Original Papers, and Intelligence in Medicine and Surgery, conducted by an Association of Physicians in Philadelphia, Baltimore, and Norfolk. Quarterly Series. No. 24. Vol. 4. 8vo. Philadelphia, October 1823.

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OF

Medicine and Surgery.

Nº II. APRIL, 1824. Vol. I.

ARTICLE I.—*Transactions of the Medico-Chirurgical Society of Edinburgh,* [Instituted August 1, 1821,] pp. 697, 8vo. four plates. Edinburgh, Adam Black, 1824.

THE Edinburgh School of Medicine has long been looked up to by the profession as the first in the Empire; and it still possesses many meritorious peculiarities, and is still supported by several distinguished teachers. Latterly, however, there has been a manifest falling off, in so far as the University is concerned—something of the dotage, perhaps, of an old institution—but this has, in many cases, been well compensated to the Medical Students of Edinburgh, by the rival exertions of private lecturers. While Edinburgh has thus been distinguished for medical teachers, it has been no less famous for superior medical works, and particularly for some of the earliest and best periodical works on medicine, and collections of papers by medical associations. The Medical Journal still published there, is one of the oldest standing in the kingdom; and although it still sometimes contains good papers, it must be pronounced, on the whole, to be much in the same predicament as the University itself. The volume now before us, we might have expected to bear some of the marks of vigorous youth, and little of the symptoms of "eild," which hang about the other departments of Edinburgh Medical Literature—insomuch as young associations and societies, like young men, are usually active, spirited, and clever. Truth, however, obliges us to confess, that there is not quite so much of this youthful buoyancy in the Transactions of the Medico-Chirurgical Society

of Edinburgh as we anticipated. Not but that they are written by clever men, and some of them in the opening noon of celebrity; yet there is altogether something a little tame, feeble, and uninteresting about the volume, considered as a whole, particularly in regard to practical remarks. The chief contributors to the volume are, Dr. Abercrombie, Dr. Kelly, Dr. Alison, Dr. A. Duncan, jun., and Dr. Gairdner, of the value of whose papers, and of the other contributions, we shall now enable our readers to judge.

I. On the Pathology of the Heart. By J. Abercrombie, M.D.

This paper is composed chiefly of cases and dissections, illustrative of inflammation, organic affections, ruptures, and displacement of the heart. It is not easy—perhaps impossible, and withal not important—to distinguish in practice between inflammation of the pericardium and inflammation of the membrane covering the heart. It occurs under various forms: chronic, idiopathic, or symptomatic; is in some of these of very difficult detection in its earlier stages; and in all, it is of extreme danger. We select the following as the most important cases of the disease:—

Cases of Carditis and Pericarditis.—We think, *in limine*, that Dr. Abercrombie is much too liberal with the lancet; and from what has been recently observed respecting the metastasis of rheumatism to the heart, supposed to be caused by venesection, we should be half inclined to hint that many, though not perhaps all, of the diseased appearances found on dissection, were the sequelæ of the previous large bleedings. For example:

"A young Lady, aged sixteen, came under my care on the 8th of January, 1812, affected with acute pain, which was referred to the pit of the stomach. It very much impeded respiration, and at times prevented the least attempt at taking a full breath. The breathing, consequently, was very short and quick, with extreme anxiety and restlessness; but there was no cough, and no vomiting. Pulse from 120 to 130. She was *largely bled*; and, in the course of a few days following, *the bleeding was repeated seven or eight times.* Blistering, digitalis, and other useful remedies, were also employed in the most active manner; but with little effect upon the pains, which continued with very little abatement for nearly a fortnight, while active treatment could be carried no further.

"She continued well till the 20th of April, (the same year,) when, having been exposed to cold and fatigue, she was seized as before, but the pain was more towards the left side; it greatly

impeded respiration, and was accompanied with great anxiety and restlessness. By *large bleeding*, blistering, &c. she was very much relieved ; so that, on the 25th, hopes were entertained that she was out of danger ; but she then became suddenly worse, with severe dyspnœa, great anxiety, vomiting, and rapid sinking of the vital powers ; and she died on the 26th.

"*Dissection.*—The pericardium adhered to the heart through its whole extent, by means of a very thick layer of coagulable lymph, which was interposed between them ; it was soft and easily separated. There was a deposition of the same kind on the outer surface of the pericardium, in some places nearly half an inch in thickness; the surface of the heart was dark coloured, and very vascular ; the lungs were in some places inflamed and indurated; the other viscera were healthy."

This is followed by a case, in which the lancet was employed with similar results :—

"A boy, aged seven, in February 1819, had acute rheumatism, with symptoms of carditis, which were soon relieved by *bleeding*, and he enjoyed good health till November of the same year ; when, after being feverish for some days, he was seized with pains in the left side, cough, and difficult breathing. For these symptoms he was treated by an able and intelligent surgeon with *repeated blood-letting*, and the other usual remedies, and the local symptoms were speedily relieved ; his pulse, however, continued extremely frequent. I saw him about ten days after the attack. About the tenth day from the time I first saw him (the twentieth of the disease), he complained of pain in the left side, which was referred to the upper part of the abdomen, as if in the region of the spleen. It was increased by pressure, and he complained very much of pressure of the whole part of the abdomen. The breathing was a little oppressed ; the pulse frequent and full. These symptoms had commenced during the night. *Blood-letting*, both general and topical, was employed *freely* through the day, and in the evening he was much relieved ; he passed a quiet night, but on awaking in the morning he was seized with slight convulsion. He then sunk into a low exhausted state, and died in half an hour.

"*Dissection.*—The abdominal viscera were all sound, and the lungs quite healthy. The pericardium adhered to the heart through its whole extent, except a small portion of the lower and posterior part. The adhesion consisted in some places of a soft gelatinous matter, in others of a firm reddish substance of healthy granulations; but the whole was soft and easily torn by the finger ; and when it was cleared away, the anterior surface of the heart was covered with firm, irregular elevations, like small granulations.

It is but fair, however, in justice to Dr. Abercrombie, to say, that in several of the cases in which he makes no mention of large bleedings—adhesions, and other marks of inflammation,

were found. The following is another, similar case, though more rapid than the two former:—

"A young man, aged sixteen, in March 1821, had acute rheumatism, accompanied by a pain in the thorax, and strong action of the heart, but was relieved by two *full bleedings*, and enjoyed good health till March, 1822. He was then attacked again by rheumatism, and was visited by a medical man about twelve days after the commencement. He had then considerable dyspnœa, *violent action of the heart*, pains and swelling of some of the joints, accompanied by some œdema of the legs, and scanty urine. Pulse 108. *A bleeding* was employed, followed by diuretics. I saw him about three days after this, or about the 15th day of the disease; he was then free from rheumatism; his breathing was very difficult, so that he could not lie down without much uneasiness; the pulse was frequent, and the action of the heart very strong and diffused. Though very doubtful of being able to arrest the disease at this advanced period, I recommended making the attempt, by *free bleeding*, which was accordingly used in the course of the next three days to a *great amount*. This treatment was well borne, and there was considerable relief from it; but the relief was only partial and temporary. The strong action of the heart continued, but without any other urgent symptom. He had continued in this state for nearly a fortnight, when one morning upon getting out of bed, he dropped on the floor, without any previous complaint, and instantly expired. This was about three months from the commencement of the disease."

"*Dissection.*—The heart appeared very much enlarged, and upon further examinations, the enlargement was found to be on the left side, where both the auricle and ventricle were very much enlarged, without thickening of their coats, and both were distended with grumous blood. The auriculo-ventricular valve of the left side seemed imperfect, one part of it thickened and corrugated, so that it seemed incapable of fully shutting the aperture. The anterior surface of the enlarged ventricle was covered with small red granulations; but there was no adhesion of the pericardium to any part of the ventricle. The only adhesion was at the base of the heart, where the enlarged auricle adhered to the pericardium by a space about two inches long, and one inch in breadth. The liver and spleen were both enlarged. There was very little effusion, and no other morbid appearance."

The Doctor gives only two cases out of thirteen, which were successfully treated—one of a man aged 74, who was seized with acute rheumatism of the wrists, ankles, and also (as it would appear) of the heart, as he had acute carditic pain and severe dyspnœa, while the pulsations of the heart were very violent. He was first largely bled, then a few hours after bled again to 30 or 40 ounces, and in two hours more to 18 or 20 ounces, when he fainted, and lay long in a state of complete

collapse. Next day he was free from pain, and continued convalescent. The other case does not appear to us to have done so well :—

"A lady, aged fifty-eight, of a full habit, and who had previously enjoyed good health, was, on the 6th September, 1821, suddenly seized with severe lumbago. She was visited by Dr. Inglis, who advised sudorifics, and the other usual remedies, and the complaint subsided in five days. On the morning of the 19th she felt considerable oppression of the præcordia, with a constant and very uneasy pulsation of the heart, as if she were out of breath with quick walking. The pulse was frequent and irregular. She was now again visited by Dr. Inglis, who *bled* her to ℥xx.

"On the 20th, the same symptoms continuing she was *bled* again in the morning to ℥xx. by Dr. Inglis, and I saw her along with him about mid-day. She then complained of a feeling of weight and oppression across the region of the heart, and a constant uneasy pulsation, which was felt distinctly by the hand laid upon the thorax, and even on the epigastric region. She was again *bled* to nearly ℥xx., a large blister was applied, and in the evening we found her much relieved ; the pulsation had greatly subsided, and her feelings were comfortable, but the pulse continued irregular, though reduced in frequency. The blood was not buffy. She was left for the night, with an antimonial solution to be taken at intervals ; but we were sent for at three o'clock in the morning. The pulsation of the heart had returned, with much oppression of the præcordia ; the pulse, as before, very frequent, rather weak, and so extremely irregular, that it could not be counted. She was *bled* to about ℥xx. When that quantity was taken, she became very sick and faint, vomited repeatedly, and continued for a considerable time sick. As the sickness went off, she felt the pulsation subside, and soon after she fell asleep. The pulsation of the heart had entirely subsided, and she was free from any uneasiness.

"On the morning of the 23d, she continued pretty easy, but there was a slight pulsation to be felt by the hand, and the pulse had become again irregular. On account of these symptoms, she was again bled to ℥xviij. or xx., which she bore well. From this time, by spare diet and quiet living, she continued to improve ; but for some weeks, the slightest exertion produced irregularity of the pulse. She had also some œdema of the legs, which was easily removed by diuretics, and by the end of October she was in good health, though liable to palpitation from any exertion. Early in the winter she had another attack, which, however, was slighter than the one now described, and yielded more readily ; but, since that time, *her pulse has been always irregular, and she is liable to strong actions of the heart, upon any exertion or exposure to cold.*"

Angina Pectoris.—Dr. Abercrombie thinks that this complaint depends chiefly, if not altogether, on derangements of the muscular action of the heart.

"The term spasm has sometimes been applied to them: the phenomena appear rather to favour the conjecture of diminished action, one of the cavities being loaded with blood, which it is unable to expel, and thus interrupting the harmony of the whole. It is probable that a condition of the parts may occur as an incidental and temporary affection; and that, after continuing to recur for some time, it may be removed, and the parts be restored to their healthy relations. But, it is also probable, that after it has once taken place, it may be more and more liable to recur from slight causes, until it terminate in permanent diminution of the muscular power of some part of the heart, and this be followed by permanent enlargement. The subject is one of much interest, because it is probable that the affection is of such a nature that it may be arrested in its progress, by minute attention, at an early period; but if allowed to advance to a certain stage of its progress, will terminate in hopeless disease. The causes of such an affection are extremely obscure. Perhaps a slighter degree of the rheumatic inflammation may lay the foundation for it in some cases, so slight as to escape observation when it first takes place. Perhaps over excitement may derange the muscular power, as we sometimes find patients referring the origin of diseases in the heart to violent exertions in running. But, in many cases, no cause can be traced, and the subject, it must be confessed, is involved in much obscurity."

The author has seen angina pectoris with ossification of the coronary arteries—the disease without any such appearance—and extensive ossification of the coronary arteries, without any symptom of angina pectoris;—circumstances which should seem to place any affection of these vessels *hors de combat.*

Organic Affections of the Heart.—It is a very singular circumstance, connected with these complaints, that in some cases, even in extensive organic disorder, the pulse is little affected. Such disorders may also exist without producing any very urgent symptom, though they may, nevertheless, prove suddenly fatal.

"A man, aged sixty, who had previously enjoyed perfect health, except occasionally slight dysuria, awoke early in the morning of the 30th September, 1812, complaining of violent pain in the upper part of the abdomen. It afterwards extended to the lower part of the belly, and was attended by suppression of urine. He had also great oppression of his breathing, and some vomiting. At nine in the morning he was found in a state of insensibility, and without pulse, and died about twelve.

"*Dissection.*—The urinary bladder seemed a little thickened in its coats. No other disease could be detected in the abdomen. In the brain there was a very small quantity of bloody fluid in the ventricles. The valves of the heart were all more or less ossified, and

at the opening betwixt the left auricle and ventricle, there was a large irregular mass of ossification, which extended half way round the opening. The substance of the last ventricle was remarkably soft, as if from the effect of putrefaction, the finger being pushed through it with very little resistance, while no such appearance was presented by the right side of the heart, which was firm and healthy."

Rupture of the Heart.—The following case might have been mistaken for apoplexy :—

"A man, aged about thirty-five, had complained for some time of a headache, but had not been confined from his usual labour, which was that of a joiner. One evening he had returned from his work, and was sitting by the fire, when, in stooping forward to lift something, he fell forward on the floor and expired.

"*Dissection.*—All was sound in the brain. The pericardium was found distended with coagulated blood ; but owing to an error of the person who conducted the operation, it was neglected to ascertain the spot where the rupture had taken place, until after the heart had been cut out and laid open, and then it could not be ascertained with accuracy."

Displacement of the Heart.—The following case seems to indicate that the right lung was gradually destroyed by ulceration, while the left became so much enlarged as to perform the functions of both. The patient, who died at 21, had had severe measles at 10, of which a cough, with purulent expectoration, was the sequela. This continued; he had repeated hæmoptysis; and his growth was stinted. He had observed for three years that his heart pulsated in the right side. He died from an affection of the brain.

"*Dissection.*—On opening the thorax, the left lung first presented itself so enlarged as to occupy at least three-fourths of the cavity. It was quite healthy, except a small tubercular mass at the upper part, in a solid state. To the right of this lung was found the heart, so situated as to be in contact with the ribs of the right side. Behind the heart, and nearly concealed by it, lay the remains of the right lung—a dark and fleshy mass, like the substance of the spleen. It was about four or five inches long, about three inches broad, and an inch and a half in thickness. Internally, it contained a series of small abscesses, communicating freely with each other, and with the trachea. There were four abscesses in the substance of the brain."

II. On a Syphilitic Cranium. By Dr. Ballingall.

This paper is written with the view of showing that mercury alone, however long or actively exhibited when there is no syphilis present, will not affect the bones. The patient, whose cranium Dr. Ballingall exhibited to the society, had been long

syphilitic—and latterly, his scalp was covered with blotches and incrustations, one of which was corneous, and projected over the centre of the os frontis. There were also exfoliations of bone from the nostrils, &c. He had been much under the influence of mercury, and had partially recovered, but again relapsed. What is worthy of remark is, that though "mercury in every form had for some time been laid aside, a copious salivation now commenced, owing to the irritation from the diseased state of his mouth, affecting the salivary ducts and glands." He lingered thus for several weeks, and died. The cranium showed much exfoliation and disease. Dr. Ballingall concludes thus:—

"There is no doubt that the disease to which this person fell a victim, had a venereal origin; and, from my never having observed a similar affection of the bones in any of those numerous cases, in which I have exhibited mercury to a large extent for the cure of hepatitis, I am naturally inclined to consider the morbid appearances which this skull presents, as the result of syphilitic poison."

III. On Affections of the Bones of the Cranium. By J. Russell, Professor of Clinical Surgery.

In the first part of his paper, Mr. Russell mentions several cases in which portions of the bones of the cranium were absorbed without apparent cause. The following is of more interest:—

"In the case of a patient who had been trepanned several years before his death, the perforation of the trephine was found to be filled up with solid bone.

"Another very curious case of regeneration presented itself in the case of a young man, who received a severe injury on the head, by falling from a great height. Besides other effects of the violence, the sagittal suture was separated about one fourth of an inch through its whole length. The patient died about two years after the accident; when, upon inspecting the body, the sides of the sagittal suture were found to be still separated to their original distance, but the vacuity was completely filled up with regularly organized solid osseous matter.

"In a third case, in which a portion of bone, larger in dimensions than a crown-piece, was extracted through the scalp by excision, the deficiency was gradually supplied by a solid mass, which came at last to be elevated above the surface of the cranium. This new growth possessed all the firmness of solid bone."

IV. Pathology of Congestions in the Brain. By Dr. G. Kellie.

We consider this as one of the best papers in the volume. In our opinion, it gives more important facts in a few para-

graphs, than all the volumes of laboured dissections with which we have lately been deluged by the fabling pathologists of the continent. The inquiry originated in *post mortem* examinations of two bodies, supposed to have perished from cold, near Leith, on the night of November 3d, 1821, the thermometer then ranging from 30° to 34°, at mid-night, with sleet, snow, and a furious gale. The similarity of appearances were remarkable in the two cases—(the one was a man about 40, the other an elderly woman.)

"In both we observed the same soundness and freshness of the bodies—in the abdomen the same congestions of the same viscera, and especially the same remarkable redness of the small intestines, from turgescency of their blood-vessels—the same absence of fœtor, putrescency and tympanites—the same perfection of the other viscera, with the exception of the pancreas of the woman.—In the head the same bloodless state of the scalp—the same turgidity of the vessels on the surface of the brain—the same congestion of the sinuses—the same soundness of the cerebral texture—and the same serous effusion, amounting in the one to nearly four ounces, in the other to about three."

Dr. Kellie, in reference to the doctrine of the cerebral plenum, to the consideration of which he was led by the dissections mentioned, says—

"One of my oldest physiological recollections, indeed, is of this doctrine having been inculcated by my illustrious preceptor in anatomy, the second Monro—a doctrine which he used to illustrate by exhibiting a hollow glass ball filled with water, and desiring the pupils to remark that not a drop of fluid escaped, when inverted with its aperture downwards. His opinions, however, on this subject stand recorded in his work on the brain and nervous system. "For," he observes, "as the substance of the brain, like that of the other solids of our body, is *nearly incompressible*, the quantity of blood within the head must be the same, or very nearly the same, at all times, whether in health or disease, in life, or after death, those cases only excepted in which water or other matter is effused, or secreted from the blood-vessels; for in these a quantity of blood, equal in bulk to the effused matter will be pressed out of the cranium. Is it then true and consistent with experience that we cannot lessen, to any considerable extent, the quantity of blood within the cranium, by arteriotomy or venesection?"

In answer to this important question, Dr. Kellie observes, that even the brains of those who have been largely depleted during life, or who have sunk from inanition, do not appear much voided of their blood. In apoplectic cases also, in which bleeding has been carried to great extent before death, the vessels of the head are found congested with blood; and in

animals bled to death, the brain still retains much of its blood, and in many cases appears even turgid and congested. Dr. Seeds, in his Dissertation "De Sanguini Misso," gives some experiments in which he bled dogs to death severally by the arteries and veins, but he could never deplete the brain entirely of its red blood; in venous bleeding *ad mortem*, the veins and sinuses of the brain were more turgid than in arterial bleeding; and in both there was more or less cerebral infusion.

To continue this experimental inquiry, Dr. Kellie, along with Dr. A. Duncan, jun., and Dr. Anderson, bled several sheep and dogs *ad mortem* from the jugular vein, the carotid arteries, and (by the agency of a butcher), in the usual way of slaughtering, inspecting the encephalons severally after death.

"It is remarkable, I think, " observes Dr. Kellie," that in whatever manner these animals were bled to death, whether from arteries or veins, or both—whether the hemorrhage was rapid or slow—whatever time, in short, was necessary to terminate their life, death did not take place till nearly the same or a proportional quantity of blood was lost.

"The summary of these observations, in so far as they apply to our present subject of inquiry, may be thus stated—that though we cannot, by any means of general depletion, entirely or nearly empty the vascular system of the brain, as we can the vessels of the other parts of the body, it is yet possible by profuse hemorrhagies, to drain it of a sensible portion of its red blood;—that the place of this spoliation seems to be supplied by extra and intravascular serum, and that watery effusion within the head is a pretty constant concomitant or consequence of great sanguineous depletion.

"If instead of bleeding, as in our examples, "usque ad mortem," we were to bleed animals more sparingly and repeatedly, I have no doubt that we should succeed in draining the brain of a much larger quantity of its red blood; but in such experiments we should, I think, find a larger effusion of serum, and be satisfied that many vessels, destined to circulate red blood, were filled with serum only, and even the larger trunks with a very thin and diluted blood."

Dr. Kellie, having thus endeavoured to show that the quantity of blood cannot be lessened to any extent by either arteriotomy or venesection, or at least that an equivalent to the spoliation will be found in the increased circulation or effusion of serum serving to maintain the plenitude of the cranium, goes on to prove that this is occasioned by the solid cranium presenting an unyielding surface to the gravitation of the atmosphere; that by removing a portion of skull to admit this gravitation, the depletion may be indefinitely aided. To prove this, Dr. Kellie removed, by the trephine, portions of cranium in several dogs, and then bled them severally *usque ad mortem*, by venesection and

arteriotomy, in the jugular and carotid, and the result was exactly as he had anticipated.

"Comparing these with the observations made on animals bled to death by simple hemorrhage, it appears that, when the head is entire, the brain still contains a considerable quantity of blood; when previously perforated very little, the brain continues to fill the cranium in the one case, and subsides within it in the other."

From this Dr. Kellie goes on to the cognate subject of repletion, inferring that the same obstacles which oppose depletion of the cerebral vessels are also opposed to their repletion, and says that it does not "seem consistent with the notion of a constant plenitude that any greater quantity of blood can be forced within the vessels of the brain, without an equivalent compression or displacement. This is proved in a manner experimentally in cases of suspension, suffocation, and drowning."

Suspension.—In this case respiration is immediately and completely interrupted, and the carotid arteries which supply blood to the brain, and the jugular veins which return it, are strongly compressed by the cord, though the vertebral arteries are supposed to supply blood to the brain as long as the heart acts. There ought, therefore, to be repletion and turgidity in the encephalon, and so it was long believed; but *it is not the fact*, as no such appearances are found on dissection of those who have been hanged. This observation is fortified by the authority of Valsalva, Morgagni, De Haen, Mr. Coleman, and by the dissections of the present Dr. Monro and our author. In such cases the external parts of the head are generally turgid, but the internal, never. The circumstance of more blood appearing to flow from the sinuses of the brain, when wounded or ruptured during dissection, than the state of the other vessels indicates to be present, and even without emptying the vessels on the surface of the brain—Dr. Kellie thinks arises from "blood pressed upwards from the jugulars and cava;" and in proof he mentions, among other things, that he has seen in animals bled to death, "the vessels of the neck till they entered the bony foramen of the cranium—empty, though the communicating sinuses of the skull were well filled with blood."

"I consider these observations on the relative state of congestion of the veins within and without the head, as good illustrations of the difficulty of repleting or depleting the vascular system of the brain; for, on the other hand, we find blood pressing upon the brain from the congested jugulars, cava, and right side of the heart, without finding any entrance into the head, till the sinuses are wounded, and the brains removed; and, on the other, the vessels within the head are found replenished with blood, though their continuations without the head are empty."

Position.—It is a common, and, we think, in some degree a correct opinion, (with all deference to Dr. Kellie) that position has great influence upon the circulation of the head, as any one unaccustomed to stoop may instantly convince himself by trial. There is much meaning, however, in Dr. Kellie's limitation of the case to the healthy.

"Healthy individuals may stand on their head, hang by their heels, or change the posture of their bodies in every possible way, as we observe in the gambols of school-boys, or the more curious feats of adult and professed tumblers, without sustaining the slightest injury or inconvenience. Many of the occupations and employments of industrious life are carried on in a continued stooping posture, as in the acts of weeding, reaping, gleaning, planting, digging, washing, and many such like. Miners, shoemakers, and other artizans, work the whole day in very constrained and stooping postures; and the sailor, in the act of furling and reefing, hangs over the yard-arm in such a way that his head is not unfrequently the lowest part of his body. Yet in these, and many other such examples of constrained situation and stooping posture, whether from choice, necessity, or infirmity, the circulation within the head continues to go on freely, and these subjects have not, I apprehend, been observed to be more prone to congestive diseases of the brain, to palsy and apoplexy, than those whose more fortunate circumstances permit them, "erectos ad sidera tollere nullus."

Diseases of the Heart.—Dr. Kellie is of opinion also, contrary though it be to some high authorities, and among others Corvisart's, that in a sound condition of the brain and its vessels, diseases of the heart have little or no tendency to produce lethargy, palsy, and apoplexy, nor by consequence, plethora, congestion, or disordered circulation within the head, although the livid, bloated, and sometimes swollen countenance, and the turgid and throbbing neck, bear ample testimony to the existence of plethora, obstruction, and congestion in the vessels exterior to the cranium. He has never seen lethargic nor apoplectic symptoms in any patient affected with structural disease of the heart; though in one case of this kind there was paralysis of the right side. The opposite cases given by Corvisart, he seems to consider as accidental complications and co-existences.

Ligatures and Tumours.—In a masterly review of experiments and operations, from Aristotle downwards, in which the jugulars or carotids were tied or obstructed, Dr. Kellie finds that little or no disturbance was produced on the circulation or functions in the interior of the cranium, however much this was the case externally.

He concludes, that these causes, usually supposed to be productive of repletion and congestion of the brain, have been

greatly over-rated; for they have, comparatively, little effect so long as the organ remains healthy and unchanged, and its vessels sound. The proximate causes of apoplexy, he thinks, are changes which take place in the brain itself—disorganizations and structural alterations of its own texture, and of its vessels and membranes.

V. On Dislocation of the Hip and Shoulder Joints. By Dr. A. Hunter.

From the dissection of a recent unreduced dislocation of the hip joint, in which all the small muscles near the joint, and all the ligaments which belonged to it, were torn from their attachments, so that it was impossible to say which was the attachment of the gluteus minimus, of the pyriformis, of the obturator internus, &c.—Dr. Hunter infers that, in such cases, "the soft parts do actually suffer to a much greater extent than surgeons are willing to admit, or than the perfect cures which are obtained, where the bone has been early replaced, would lead them to suspect." His remarks on the shoulder joint are similar, and of little interest.

VI. On Tobacco in Tetanus. By Dr. Anderson, of Trinidad.

The author has observed tetanus to be much more frequent in the country than the town of Port of Spain; more frequent among negroes than whites; and among strong, robust men than among females. Having, like other practitioners, been quite unsuccessful with opium and mercury, Dr. Anderson, on the report of its efficacy on the Spanish Main, had recourse to tobacco in his subsequent treatment, and was successful in two female cases of the traumatic species. The fresh native tobacco, which is milder than the Virginian, was employed in the form of fomentation of the throat and fauces; of cataplasms to the wound; of glysters; and of the general warm bath continued to nausea; while calomel, jalap, gamboge, castor oil, &c., were given to clear out the primæ viæ. Dr. Anderson observed, that "the strength of the spasms seemed to be in a direct ratio with the oppressed state of the chylopoietic viscera, as indicated by the tongue."

VII. Case of Phrenitis cured by opening the Radial Artery. By Mr. Rhind.

De Sanza, Mr. Rhind's Native assistant in Hindostan, was suddenly seized with "low muttering delirium; his pulse quick, hard, and small; his eyes much dilated and inflamed."

He breathed laboriously, often started suddenly with loud vociferation, muttered prayers incoherently, &c. No blood could be obtained from the arm or the jugulars, and but little from the temporal arteries of either side.

"His extremities became cold, and neither was his breathing nor the pulsation of his heart perceivable. He was to all appearance dead, so much so that the attendants had already begun to close his eyes and stretch his limbs, when happening to observe a case of scalpels upon the table, the thought suddenly struck me, that as one last and only hope, I would try the effect of opening the radial artery. I immediately snatched up one of the scalpels, cut down upon the artery, and upon its being laid fairly bare, made a small puncture in it with the point of a lancet. A few drops only of blood oozed from the wound; presently, however, it came in a small interrupted stream, as from a vein, and nearly of as dark a colour; the stream gradually enlarged, till at length the arteries recovering their natural impetus, the blood was propelled per saltum, and at the same instant the poor fellow opened those eyes which every one present supposed had been closed for ever. For the purpose of finding whether he had also regained the power of speech, I asked him how he felt, and shall never forget the ecstacy with which I heard him reply, after heaving a deep sigh, "I think I am better, Sir."

"The flow of blood was now stopped by putting my thumb upon the wound, lest the too sudden depletion should cause syncope; and, after about half a minute, again allowed to flow; and this was repeated until about twenty-four ounces were abstracted."

Next day he had a relapse, and twelve ounces more were allowed to flow from the yet unclosed wound. In ten days he returned to his duty, and had not another symptom for a month, when he was seized with gastritis, which carried him off.

VIII. Messrs. Cullen and Carswell on Melanosis.

Our authors say, that melanosis, in its simple form, is quite distinct from cancer, or fungus hæmatodes, both in its seat, symptoms, progress, and anatomical characters, though it may be blended with them. Scirrhus, for example, attacks glandular structures chiefly—malignant fungous, every kind of structure; while melanosis does not affect any of the textures; even the bones, though of a deep black, are unaltered, and it is constantly found in a regular cyst, which is one of its most distinctive characters. There is, besides, no discoverable vascularity, and it is unattended with pain. It is worthy of remark, that it occurs often among horses, and particularly those of a grey or white colour.

We gave, in a former Number, the chief case related in this paper, as it was drawn up by Sir A. Halliday.

IX. On the Sedative Powers of Stramonium. By Dr. Begbie.

We are not quite certain whether the several narcotics do not rather differ in degree, than in specific power. But however this may be, it is always advantageous to multiply our resources of cure. Dr. Begbie, in using the stramonium, followed Mr. Hudson's formula, repeating quarter grain doses every third or fourth hour during the day, and in no instance exceeding half a grain. He was successful with it in idiopathic tetanus, and in various kinds of neuralgic and rheumatic pains. For example :—

"A woman, aged 50, had complained for several days of acute pain, extending from a little below the knee to the upper part of the foot, more particularly along the lower half of the tibia ; it was deep seated, and referred to the bone. A variety of remedies had been employed, such as leeches, blisters, sinapisms, opium, &c., without effect. The extract of stramonium, in doses of one-fourth of a grain every three hours, was recommended, but impatient for relief she discontinued its use before any benefit could be expected, and persevered for several days in the use of large doses of carb. ferri præcip. with some advantage. The pain gradually lessened and disappeared. In a second and more severe attack some weeks after, the iron and other remedies failed, and recourse was had to stramonium in doses of one-third of a grain. The relief was remarkable before many doses were taken, and in the course of a few days the symptoms disappeared. The patient went to the country soon after, and requested a supply of the medicine, so sensible was she of the benefit derived."

X. Influence of Panic in propagating Fever. By Dr. Hamilton.

After alluding to the well-known story of Vander Mye, respecting the siege of Breda, (see Lind *on Scurvy*, page 349,) Dr. Hamilton relates, that from a panic of fever influencing the inmates of the Magdalen Asylum of Edinburgh, "in the course of four days, out of a community of less than fifty individuals, there were twenty-two apparently labouring under fever."

"It now struck me that there was certainly much delusion in all this, and that much must be owing to panic and imitation. Determining, at all events, to act upon this belief, I went to the sick room, and, in very decided language, stated my opinion. I told

them that such rapid spread of disease was never heard of, and insisted that the fumigation must have fortified them against the most virulent contagions:—that, though I had no reason to suppose that they wished to deceive me, yet I was satisfied they were deceiving themselves;—that they were yielding to their fears alone, and getting ill, merely because others had done so before them. I also collected the women that had hitherto remained well, and pointedly stated the same truths to them. I assured them that they were quite fortified against all infection;—that most of those who had taken ill, had probably injured themselves by their apprehensions; that they had thus exposed themselves to the disagreeable process of a long illness; that I had seen them in the hospital undergoing a severe treatment, and a painful regimen;—that there was no fear for them, and if they would keep a good heart, I would insure them against indisposition.

"The effects produced were as decisive as I could have wished. The minds of all in the house were immediately re-assured. The tide of opinion set in the contrary direction; and now they were all confident, as formerly they were desponding. Of the eight patients then in the sick-room, several recovered in the course of the same night. They found that they could sit up, and walk about a little.

"Next morning this change in the general mind was still more apparent. Several were going about their usual employments, who were far fitter for their beds; one girl in particular, who was really oppressed with disease, and threatened with severe typhus, disobeyed my positive orders to lie down. With difficulty she was persuaded to take an emetic and cathartic, which for a time relieved her. After much struggling for two or three days, she was at length forced to yield to the progress of the complaint, and was conveyed to the hospital. The other seven, however, were speedily re-established in perfect health, and in a few days afterwards they were all engaged in their usual occupations."

XI. Erosions of the Alimentary Canal. By Dr. Gairdner.

This is a very laboured and meritorious paper, shewing considerable power of research and observation. Dr. Gastaldy thinks that the erosions and perforations of the stomach, as seen by him, resembled those attributed by John Hunter to the action of the gastric juice after death. The most distinct account of the disease, previous to this, is given by Cruveilhier: the general symptoms are

"Diarrhœa green liquid stools, with great thirst and gradual loss of strength, but without increased heat of the body, or increased rapidity of the circulation—vomiting—a state of somnolency frequently occurring, during which the eyes are partially open, and from which the slight touch awakes the infant—perfect mental acuteness—progressive and rapidly increasing debility—and imme-

diately before death, cold extremities, profuse sweatings, and a fluttering, unequal, rapid pulse :—these symptoms, which occur pretty nearly in the above order, constitute a character of disease which will not be readily mistaken by an attentive practitioner, and in every one of them the observations of the French physicians agree with mine. I did not, indeed, observe in my cases the violent crying and sudden movements, as if from tormina, which are uniformly mentioned in those of Cruveilhier ; but in every thing else, the symptoms are quite alike."

On dissection, such cases usually show erosions and perforations of the stomach and intestines—arising, as the author thinks, not so much from the disease during life, as from the action of the gastric juice, or other erosive fluid, after death. He adopts, therefore, the well-known theory of John Hunter, and for the following reasons :—

"1. The human stomach has been found perforated in persons who have died a violent death, without previous illness, and in whom, therefore, it is to be presumed that no such important lesion of the vital organ had existed prior to death. I need scarcely add, that this statement rests on the authority of Mr. John Hunter, who mentions three cases of perforation of the splenic extremity of the stomach, in two of which death was produced by injury of the head, and in the other by strangulation.

" 2. Similar observations corroborating this inference have been made on the stomachs of the inferior animals—on those of fishes, by Hunter, Spalanzani, and Dr. Joseph Adams ; on those of rabbits, by the latter, and also by Sir Astley Cooper, and Mr. Carlisle ; and on that of a dog, by Dr. Adams. In all these the animals were put to death by violence. I have, myself, witnessed similar appearances.

" 3. In cases in which a perforation of the alimentary canal has occurred ; erosions of the surface of the adjoining viscera ; softening and partial solution of their substances ; erosion of the abdominal parietes, and erosions and perforation of the diaphragm ; with effusion of the contents of the stomach through such perforations, into the cavity of the thorax, have all been occasionally met with. No symptoms have been observed in such cases from which any injury of these important parts could have been surmised. Appearances of this description are mentioned in Mr. Hunter's work above cited—two instances have already been quoted from Jaeger, and similar facts are recorded by Professor Chaussier, Mr. Alan Burns, and, more recently, by Professor Haviland, of Cambridge.

" 4. In the stomach of a fish, which was perforated at one extremity, Dr. Adams found a smaller fish partially digested, and a live worm, quite entire. The worm was killed ; and after having been a few hours re-immersed in the fluids of the stomach, was found "more than one half digested."

" 5. The theory derives further support from the cases already adverted to, of perforation of the stomach and bowels in the bodies

of persons who have died of other diseases; since, it is not easy to explain why any disease of the stomach or bowels should effect such extensive destruction, simultaneously with pneumonia, apoplexy, or other convulsions, and that without exhibiting any symptoms calculated to excite suspicion of its presence.

"6. Mr. Alan Burns, of Glasgow, after exhibiting to his pupils a perforation of the stomach, and pointing out to them that the liver was sound, replaced the parts in situ, and sewed up the body. On opening it after two days, he found that the peritoneal coat of the liver, opposite to the opening in the stomach, was completely dissolved, and that the liver itself was tender to a considerable depth."

He sums up his conclusions in a few propositions, which we shall now give, referring those, whom the subject may interest, to his excellent tables of cases, from Cruveilhier, Jaeger, Laisné, Haviland, Zeller, A. Burns, &c.

"1. That erosions and perforations of the stomach, and of other parts of the alimentary canal, which do not appear to be affected by ulceration, are frequently found in the body of infants, whose symptoms during life would not lead any one to suspect disease of that canal; but who appear, both from the indications during life, and from the phenomena on dissection, to be the victims of other diseases.

"2. That similar erosions and perforations are found in the bodies of infants, whose death is the result of a peculiar disease, distinguishable in the living subject by very marked symptoms, which are such as to suggest to the mind of the practitioner the idea that the alimentary canal is the seat of the affection.

"3. That in both these descriptions of cases, the erosions and perforation are produced by the action of the fluids of the alimentary canal after death.

"4. That in cases of the first description, it is probable that the erosion often happens without any previous disease of the eroded parts; but in cases of the second class, there does appear to be sufficient evidence of the existence of certain organic changes in the living subject, by which some portion of the alimentary canal is so altered, as to be rendered more easily soluble after death by the action of its contents.

"5. That erosion after death does not always follow this morbid alteration; a circumstance probably to be imputed to a deficiency in the quantity or solvent power of the contained fluids."

XII. Pathology of Scrofulous Diseases. By Dr. W. P. Alison.

This is also an excellent and well-reasoned paper; and though the topics are far from novel, we have seldom seen them placed in a more clear and attractive light.—The usual opinion of systematic authors, from the time of Hippocrates to

our own, that phthisis and hæmoptysis occur rarely before fifteen, or after thirty-five years of age, is shown, from many facts, not to be correct.

"Dr. Home states, in his clinical experiments, that of the phthisical patients he had treated in the clinical wards here, "about half were at least forty years of age, and some of them much beyond that period." In Bayle's treatise on phthisis, there is a table of the ages of about 100 persons, all above the age of 15, who died of phthisis in one year, in the hospital of La Charité, at Paris—of whom 33 only were below the age of 30, and 67 above it, and 44 of these last above 40. Of 135 deaths from phthisis in two years, at Chester, of which we have an account by Dr. Haygarth, 25 occurred before the age of 15; 42 between 15 and 30; and 68 above 30; of which last number, 44 were beyond the age of 40. Of 96 deaths from phthisis, at Harrington, which are recorded by Dr. Aikin, 24 were below the age of 15; 36 between 14 and 15; and 36, (or three-eighths of the whole) beyond the age of 45. Of 75 deaths from phthisis, in the Dispensary, at Plymouth, 10 occurred before the age of 15; 16 between 15 and 30; and 49 beyond the age of 30; 23 of these beyond that of 40. Of 214 deaths, by phthisis, at Carlisle, recorded by Dr. Heysham, 59 occurred before the age of 15; 60 between 15 and 30; and 95 beyond the age of 30; of which last number, 61 were beyond that of 40. Excluding the cases of Warrington, where the ages set down in the tables are different from the others; we have, in all these tables, records of 524 deaths from phthisis, by accurate and intelligent observers; and of these there are

Under 15, ...	94,	or nearly one-third.
Between 15 and 30,	151,	or hardly more than one-fourth.
Above 30, ...	279,	or more than one-half.
And of these above 40,	172,	or just one-third.

"In Sussmilch's table of deaths, at Berlin, in 1746, of 620 deaths from phthisis, 251 are stated to have occurred before 15 years of age; 73 between 15 and 30; and 296 after the age of 30; of this number 230 occurred after that of 40. In the practice of the New Town Dispensary here, there have been 55 deaths from phthisis, in the last two years. Of these, 8 occurred before 15 years of age; 13 between 15 and 30; 34 after 30, and of these last, 24 after 40.

"The observation of the greater frequency of deaths from phthisis beyond the age of 40, than between the age of puberty and 30, is, I believe, applicable to the lower orders only; among the higher, the occurrence of fatal phthisis beyond the age of 40, is certainly rare in comparison with its occurrence between 15 and 30."

Dr. Alison then goes on to show, from bills of mortality, statistical tables, and other documents, that scrofulous diseases are more prevalent and fatal in towns and cities, than in country places, and chiefly among children; for example:—

"In several of the country parishes in Switzerland, and in Scot-

land, the probability of life has been found as high as 45 years, and upwards; that is, instead of half the persons born being cut off before attaining the age of 3 and 5, as at London or Manchester, half live to the age of 45 or more. In the parish of Ackworth, in Yorkshire, it appears, by a very exact account kept by Dr. Lee, of the ages at which all died there for 20 years, that half the inhabitants live to the age of 46; and there is little doubt, that if the same kind of account had been kept in some of those country parishes before mentioned, in which the mortality is as small as 1 in 66, or even 1 in 75; half of the born would have been found to live to 50 or 55. In three parishes in Somersetshire, Mr. Maneford found the probability of life to be 45, 58, and 53 years. Mr. Malthus, has even quoted authority, which appeared to him satisfactory, for the probability of life; in one parish, in Switzerland, being as high as 61 years; and according to the same authority, (that of M. Muret) in the whole district of the Pays de Vaud, only one-third, and in some parishes one-fourth, or even one-fifth of the children born, die before the age of 15. In the village of Royton, near Manchester, Dr. Perceval found, that one-seventh only of the children born died before the age of five; so that the mortality under that age, in that village, was to that in Manchester, as 2 to 7.

"I examined lately a register, which I know to have been kept with great accuracy for nearly four years, of deaths in a country parish, in Scotland, that of Rafford, near Forres; the population of which parish is almost exactly 1,000 persons. Of 42 deaths that had occurred in that time, two only, or 1 in 12, were below the age of 5 years; whereas, in Manchester, on an average of twenty years, the proportion of deaths under 2 years to the whole deaths was 1 to 29."

He also brings testimony, from dissection, to prove that the phthisis of the old is very different in its pathology from that of the young. In the young, there is chiefly found the white tubercle, which, according to Dr. Abercrombie, passes slowly and insidiously into ulceration, without very active symptoms. In the old, hepatized induration is more frequent. Dr. Alison thinks the white tubercle more an original affection of constitution, hereditary or otherwise, while the hepatized state of the lungs may occur, independent of this, in any individual.

Dr. Alison next proceeds to inquire into the mode of the developement of scrofulous diseases, and particularly the question whether tubercles are a cause or a consequence of inflammation. Dr. Baron, of Gloucester, maintains that tubercles are quite independent of inflammation; an opinion also espoused, though not quite so broadly, by Bayle, Laennec, and Andral. Our author, with Broussais, leans to the opposite opinion.

"In certain constitutions, inflammation of various textures tends

to effusion of a whitish or yellowish matter, not in any considerable deposits, but chiefly in small circumscribed masses, more or less completely separated from each other; and that these are a common origin of scrofulous tubercles. Whether this kind of exudation differs from the commencement, in its nature, as well as its form, from the more ordinary effusion of lymph, in consequence of inflammation, or whether the difference in the subsequent changes which it undergoes from those of more healthy effusions, depends on the subsequent state of the vital actions of the part where it is formed, is a point that remains for discussion."

He concludes, however, that it can signify very little in practice, whether we believe that inflammation has the power to *generate* tubercles in certain constitutions, or only believe, that it has the power *so to accelerate* their progress, as to make them dangerous, and fatal within a few weeks, or months at the most, when they would otherwise have been harmless. The frequent excitation, therefore, and rapid acceleration of tubercles, is the great practical limit to the use of the tonic remedies and regimen in scrofulous habits. For, after scrofulous disease has fairly shewn itself, this plan is always met by contradictions, and must be acted on with much more caution —with more interruption—and, indeed, often interposition, with opposite remedies—to a less extent,—and, if the disease involve affection of the whole system, with infinitely less prospect of ultimate success, than it might have been, while the accession of scrofulous disease was only a probable contingency.—The importance of using all means of counteracting the scrofulous tendency, where it is suspected to exist, while it is still safe to use these means with effect, becomes much greater when we are convinced, that, after scrofula has unequivocally shewn itself, it can seldom be safe to use them to the extent that is requisite to make them effectual.

Passing over a very long paper, by Dr. Duncan, junior, chiefly consisting of cases illustrative of inflammatory affections, and but little capable of interesting analysis or abridgment, we come to another communication by Dr. Abercrombie, occasioned by that of Dr. Alison, just analysed.

XIII. On Tubercular Diseases. By Dr. Abercrombie.

In tubercular lungs, the most abundant structure is generally the firm, white, opake matter, analogous, we have every reason to believe, to the tubercular disease of the mesenteric and lymphatic glands.

"In their first state of simple enlargement, these glands present, when cut into, a pale flesh colour, and a uniform soft, fleshy

texture. As the disease advances, the texture becomes firmer, and the colour rather paler. In what may be considered the next stage, we observe portions that have lost the flesh colour, and have acquired a kind of semi-transparency, and a texture approaching to that of soft cartilage. While these changes are going on, we generally observe, in other specimens, the commencement of the opake white structure, which seems to be the last step in these morbid changes, and is strictly analogous, in its appearance and properties, to the white tubercle of the lungs.

"In the most advanced stage, the opake white, or ash coloured tubercular matter is the most abundant, and this, afterwards, appears to be gradually softened, until it generates into the soft, cheesy matter, or ill conditioned suppuration, so familiar to us in affections of this nature."

Chemical analysis shows that the matter is chiefly albuminous, which opposes the opinion that tubercles are hydatids.

"In the early stages of the disease, it seems to be deposited in a soft state, and to be involved in the structure of the gland; the gland, in other respects, being vascular and organized, and probably capable of performing its functions. It is in this state that we see the albumen coagulated when the gland is plunged into boiling water, producing so immediate and remarkable a change in its appearance and texture. As the disease advances, the proportion of albumen seems to increase, while, at the same time, it assumes a more concrete state, and the mass, in general, becomes less vascular, and less organized. In the last stage, the vascular structure of the gland seems more and more to disappear, until it passes into a mass, presenting the properties of coagulated albumen, with little or no organization.

"There seems, then, to be some ground for the conjecture, that this deposition of albumen is the origin of tubercular disease. It is in the mesenteric and lymphatic glands that we have the best opportunities of marking its progress; but betwixt the various stages of this disease in them, and the various forms of tubercular disease of the lungs, there is the most close and remarkable analogy."

ARTICLE II. *De la Moelle Epinière et de ses Maladies; ouvrage couronné par la Société Royale de Médicine de Marseilles dans sa séance publique du 23 Octobre*, 1823. Par C. P. OLLIVIER, d'Angers. Paris, 1824, 8vo. p. 416.

Owing to the labours of our modern physicians, our author is of opinion, that medicine, in a short time, will reach a

degree of certainty which was once thought to be altogether ideal; and, with M. Laennec, he imagines that pathological anatomy will become the polar star of nosology, and the surest guide of medical diagnosis. We may observe, however, that similar hopes have been entertained of some favourite practice from the earliest times of medicine; and it is difficult to say, whether this has happened oftenest from the instability, or the indolence of mankind. We have men who put all their trust in mercury, or purging, or blood-letting, or in the affusion of cold water, or in friction with vinegar and water; or others, who see in almost all medical phenomena, stricture of the rectum, or bile or hepatic torpor. Such practices or opinions, indiscriminately adhered to, may have done much harm; but it is by such means only that their true value can be ascertained. Every one, therefore, who wishes prosperity to medicine, will rejoice at the present rage for pathological anatomy, and will only regret that so many attempt to describe morbid appearances, who know little or nothing about anatomy.

It is from pathological anatomy, especially, that M. Ollivier expects the elucidation of those diseases which have been called nervous, and of which, till the present day, our notions have been exceedingly confused, if not altogether erroneous. With a view of adding to our knowledge on this subject, he has written his present work on the spinal marrow and its diseases; which he has divided into three parts. In the first, he treats of its anatomy; in the second, of its functions; and in the third, of its pathology. In doing this, he has joined his own observations to those of others: and he publishes his work merely as a sketch or outline, to be filled up and corrected by future pathologists. The subject is, indeed, an interesting one, and it is still, as it were, in its infancy.

In his first part, our author has made many additions to the anatomy of the spinal marrow; and we regret that our limits will not allow us to give an entire translation of it. He seems to have proved that it was formed previous to the brain, and that the latter is only a prolongation of it.

The spinal marrow is so necessary to life, that there are few animals that want it; and it is always, more or less perfect in proportion, as the organization of the other parts of an animal is perfect. From all that has been written on the subject, from Hippocrates downwards, joined to his own observations, M. Ollivier concludes that the spinal marrow has a direct influence in the production of feeling and motion in the trunk and limbs, and is also an agent for the transmitting the manifestations of voluntary actions.

"With respect to the latter power, the spinal marrow is dependent on the brain; the facts, on the other hand, which seem to prove its independence, only show that the influence of the brain, on certain vital actions, is less evident when the organization of an animal is imperfect. The short existence of animals which have no brain, and the vital phenomena of fœtuses, and very young animals, are a proof of the justness of this remark. In short, the higher an animal is in the scale of being, the more intimately does its nervous system depend upon a centre. But more is produced by the influence of the spinal marrow than feeling and motion; its influence is extended to the internal phenomena connected with the preservation of life; the circulation of the blood and respiration. Haller has made the motions of the heart depend on irritability alone; yet he has admitted, singularly enough, that their production is influenced, in an especial manner, by the spinal marrow."—pp. 61-2.

After mentioning the experiments of Legallois, Wilson Philip, Clifte, and Rullier, M. Ollivier observes—

"We must conclude that the heart may act without the spinal marrow; but that when it exists, the action of the heart is subordinate to it. The influence of the spinal marrow upon respiration is much more direct, and much more immediate. This function, indeed, is altogether dependent on it, at least in the mammalia; and the intimacy of this dependence may be explained by the connections which subsist betwixt the respiratory nerves and the spinal marrow, from which they emanate. If we remove from an animal of the class mammalia, the origin of the eighth pair of nerves, it dies rapidly of real asphyxia, although the other respiratory nerves remain uninjured. It is of asphyxia, also, that those individuals die, in whom the spinal marrow is injured in its superior and cervical portion; and the nearer the seat of injury is to the origin of this pair of nerves, the sooner will death ensue. On opening the bodies of such persons, we find, in general, the lungs, and other internal organs, more or less injured, or crammed with blood; and this congestion is always more evident when the death of the animal has been slow. As far, then, as respiration and the circulation of the blood is concerned, we may consider the spinal marrow as a centre of insulated vitality, independent of the brain. Do not its motions, which are synchronous with those of respiration, prove still more forcibly the intimate connection which subsists betwixt it and the respiratory and circulatory organs? In the opinion of several authors, the spinal marrow exerts an influence on other actions of internal life, by means of the great sympathetic, which, according to Legallois, has its roots in the spinal marrow; and I think this last opinion is supported by the experiments since made on the great sympathetic, by M. Weber. He has found that the size of this nerve is always in a direct ratio to that of the spinal marrow; that it is seen, but only in faint outline, in

fishes where the spinal marrow is just beginning to shew itself; that, as they increase in size, they preserve exactly the same proportion; and that thus, for example, it is very large in the frog, but scarcely visible in the adder, and that the spinal marrow of these two animals observes the same ratio. Another observation of the same author, appears to add still more weight to the opinion of Legallois. He found that, in proportion as the eighth pair became enlarged, and was supplied with more numerous and bulkier ramifications, the sympathetic appeared diminutive in size; so that, in certain animals, the parvagum seemed altogether to supply its place. We are thus disposed to admit, that the functions of internal life have their origin in the spinal marrow, or at least, to think it extremely probable that the great sympathetic has its roots there, since the eighth pair, which in certain animals performs its office, has its origin from the spinal marrow, in all those animals which have one."—pp. 64-6.

On a similar kind of reasoning, M. Rochetti has founded his opinion, that the spinal marrow is a principal agent in nutrition; and he observes, that the activity of nutrition in animals is in the inverse ratio of the size of brain, and in the direct ratio of that of the spinal marrow; and that this law holds good, not only in the more perfect animals, but in the crustacea, and in insects and worms. M. Fray has formed a similar opinion, and makes the spinal marrow the seat of the the *vis medicatrix naturæ*. But why should we waste our time in enumerating, with M. Ollivier, the mere opinions of authors on this subject. Let us rather hear him on a subject, in which a priority of discovery is claimed by an English writer.

"As we have already remarked," he observes, "that the spinal marrow contains the two principles of feeling and motion, we may inquire in what parts of it each of them resides? The spinal marrow is formed of two substances; the one external and white, the other internal and cineritious; and as anatomy shows that the filaments, which compose the roots of the spinal nerves, are evidently connected with the latter, we may suppose that it is from the cineritious part that the nerves principally derive their action. We have seen, also, that the filaments of the anterior roots are remarkably smaller than those of the posterior roots. The experiments of C. Bell, and Magendie, show that this material difference is connected with a difference of function; and they have proved that feeling emanates from the posterior, and motion from the anterior roots. However, it does not appear that each of these functions is exclusively appropriated to each order of roots; for when we excite, separately, the nerves of feeling, or the posterior, contractions are produced in the muscles to which these nerves are distributed, although, in general, they are more complete and much stronger, when the exciting cause is directed at once against the anterior nerves. In like manner, we observed slight marks of sensibility, when the anterior roots alone are irritated."—pp. 70-1.

It would appear that this intermingling of energies depends on the two cineritious fasciculi of each lateral half of the spinal marrow being intimately blended at the point of contact.

"If," says M. Ollivier, "we consider the bulk formed by the junction of these four cineritious fasciculi relatively to the white substance which surrounds them, we must allo wthat this central portion is much larger in man than in animals. This seems to be a new proof that the cineritious substance is the very seat in which the active principle of the spinal marrow resides; for it evidently becomes less with age, and is much less distinct in the spinal marrow of old people."—pp. 73-4.

We shall not follow our author in his speculations concerning the use of the cerebellum, and other parts within the cranium; agreeing entirely with him that the diversity of opinion on that subject only shows that the functions of these parts are as yet but little known. The same thing may be said of the white substance of the spinal marrow.

We now enter on the third part of the work. It is divided into ten chapters; on each of which we shall be more or less diffuse in proportion to its novelty or importance.

No organ in man, in M. Ollivier's opinion, is so little liable to disease as the spinal marrow. Even those general affections which attack all textures and all organs, seem always to respect it; and though cancer has often attacked the brain, it has almost never been detected in the spinal marrow. Its diseases as yet have been little studied, and many of them are extremely rare; but Hippocrates, Celsus, Aritæus, and Galen, were in so far acquainted with them.

In the first chapter our author considers the malformations of the spinal marrow; a subject which is rather curious than useful. There are cases on record where it and the brain have been completely wanting; but in general this was more apparent than real. In such cases a sac has been formed, more or less irregular, occupying the superior and back part of the head, extending to a variable distance down the spine, and filled with a yellow and viscid fluid. This sac is generally torn at birth, in which case its existence is attested by irregular membranous shreds, but without a single trace of brain or spinal marrow. The fluid above-mentioned is the medullary matter in its rudest state. Upon the whole, our author concludes, that the absence of these organs is never primitive.

The second division of this chapter is employed on the deformities of the spinal marrow. We shall notice the first and third kinds only, as our author has found no account of them in books. The first kind is the greater or less deformity of its upper extremity.

"It would be difficult," M. Ollivier says, "to give an exact idea of the form which the spinal marrow assumes where there is no brain; sometimes, indeed, there are vestiges of the organ, but in that case their figure, their arrangement, and their mode of union with the spinal marrow are so varied, so irregular and confused, that it is impossible to give an adequate description of it."—pp. 96-7.

In two cases, however, which M. Ollivier dissected, he found the appearances exactly similar; and he has given a description of one of them. The child, a twin, lived rather more than twenty hours. Its face was not so much deformed or flattened as it usually is in such cases. A nipple-shaped, fungous, flabby mass, of a violet colour, and covered by a thin transparent membrane, occupied the centre of the uneven surface which was formed by the summit of the head, or rather by the basis of the cranium; all round, the skin, which was covered by pretty long hair, showed the appearance of irregular scars. A part of the above mass, of the size of a filbert, was bent backwards and covered the orifice of a hole, two or three lines in diameter, which was evidently connected with the cavity of the spinal canal; all the hollows of the uneven surface and of the nipple-shaped mass, and the neighbourhood of the hole were moistened with a limpid and colourless serum," (*serosité.*) pp. 99-100.

The flabby, violet-coloured mass was found to be in the situation of the Sella Turcica. But we cannot think that there would be much utility in following the author through the remainder of the dissection; and we shall merely observe, that from the valvula Vieussenii, to the middle of the body of the second lumbar vertebra, where it terminated, the spinal marrow was of its natural appearance; the consistence of its substance being pretty firm, but containing little blood, though all the vessels of the pia mater were so turgid, as to make the membrane quite red. The mucous membrane of the bowels, it may be observed, also showed some marks of inflammation.

The third kind is the bifurcation of the spinal marrow, where the spine is single for a certain length and then is split into two, either to support two heads, or to form two separate trunks below, united above to one neck. Of these there are many instances in books; but no notice has been taken in any of them of the spinal marrow, so that we know not the manner in which the two cords are united, where the spine becomes single. There is room for believing, however, that the internal cineritious substance, formed of four distinct fasciculi, loses insensibly its crucial form, and that the two fasciculi, answering to the side of the junction, become shorter as they advance, and at length entirely disappear. A case in the Bulletin of the Faculty of Medicine, p. 201, seems to favour this opinion.

A considerable variety has been observed in the length and breadth of the spinal marrow, and a canal has been sometimes detected in it—which, however, is always the product of disorganization, and in general seems to be a prolongation of the fourth ventricle. It is also sometimes formed mechanically by the blow pipe. Speaking of congenital dropsy of the spine, he observes that the opening of the humour is always the cause of death, and that the very few cases to the contrary ought not to invalidate the general rule, nor authorise a practitioner to puncture it. When death then occurs, it seems to be owing to an inflammation of the arachnoid; when extending from below upwards, produces, first of all convulsions, and then asphyxia. Instead then of puncturing, we should use remedies externally and internally, which may favour the absorption of the fluid; but these we think it unnecessary to particularize, as what our author has suggested on that head, is either already known or will readily occur to an intelligent observer.

Atrophy of the Spinal Marrow.

No author has mentioned the disease under this name. Bonetus, Morgagni, and Chaussier have noticed it.

"I have observed twice," says M. Ollivier, "a considerable diminution of the bulk of the spinal marrow; and it was so remarkable that it could be attributed to no other cause but real atrophy. The first instance of it I found in the body of an idiot, twenty years old, who was rickety, and had died of the most complete wasting. The lower extremities, in particular, were much wasted; the thighs strongly bent upon the pelvis, and the legs upon the thighs. This drawing back of the parts depended upon a permanent contraction which had existed for a long time. A large ulceration of the integuments had exposed the posterior part of the pelvis, and in the middle of it was seen a projection of the size of half an inch, formed by the end of the coccyx, which was black and dead; the veins of the spine were stuffed with blood; and in the posterior and middle part of the dorsal region, the cellular texture, exterior to the dura mater, was injected with a reddish gelatinous-like serum. The cavity of the arachnoid contained a rather abundant quantity of limpid serum; and the posterior and anterior median veins were fully distended with black blood, particularly those of the lumbar region. The substance of the marrow was of the ordinary consistence, *but its bulk was reduced to about one half of what is seen in the natural state; the lumbar protuberance (renflement) of the marrow was scarcely observable, so that the cord gradually grew thinner till it reached its termination.* The roots of the lumbar nerves were like threads: there was nothing extraordinary in the brain; the cortical substance formed a layer of very little thickness; and the organs of the other cavities were in a sound state. I could not learn what had been the appearances in this patient previously to his

death, except that for several years he could not walk, on account of the contraction of his inferior extremities.

"The second instance of atrophy of the spinal marrow was in the body of a pretty fat old man of short stature, whose limbs had not shrunk in the smallest degree; but every where the spinal cord was diminished to about two thirds of its ordinary size. It was most contracted, however, at the lower part of the dorsal region, near the ninth vertebra; *and here its diameter from side to side was about three lines and a half, and from behind, forwards, little more than two lines. The extent of this diminution was about an inch; and the lumbar protuberance (renflement) was not so conspicuous as usual.* The nerves which issued from it did not appear to be smaller than they are naturally; the substance of the marrow was neither softer nor firmer; and the membranes were not perceptibly injected. I could get no information with regard to the history of this individual. In both cases the spinal marrow was of its natural dimensions. It is in old people that we always find the most striking diminution of the spinal marrow; and in this way we may account for their comparative debility of motion." pp. 137-40.

This atrophy, our author thinks, may be occasioned by a defect in the nutritive process, or a local absorption may be produced by some mechanical cause—and he gives an instance of the latter. It is too long to be inserted here. In the cavity of the spine there was a complete interruption of the spinal cord from the ninth dorsal, to the commencement of the first lumbar vertebra, for a space approaching to four inches. The pia mater which established the continuation of the spinal cord was flattened longitudinally; but its vessels were not more injected at this point than in the rest of its extent. When laid open longitudinally no trace of medullary substance was found in its cavity; and though its sides were in contact they did not adhere.

In his third chapter, our author treats of wounds and bruises of the spinal marrow; but as most of his materials are gathered from well known writers, we shall not transcribe any part of them; neither shall we give his summary of the symptoms, prognosis, and treatment of such cases, as we think he has not shown a great deal of talent in conducting, or arranging his matter.

The fourth chapter, on compression of the spinal marrow, contains little novelty, if we except a few cases; indeed compression of the spinal marrow has many things, in common with its wounds and bruises. It may take place all at once, or slowly; and, in the latter case, the symptoms, for a long time, attract but little notice. They commonly depend on rickets, scrofula, and syphilis.

"One rickety patient, sixty years of age, who was only four feet high, and much distorted, was, in 1820, exposed for several months, in a ward of the Hospital de la Pitié, to cold and damp, and soon began to complain of a constant deep-seated pain in the middle and back part of his head, and down his neck. The pain gradually increased, and became much worse whenever he had a mind to eat or drink; imperceptibly the motions of his head became more difficult, and he felt, as he said, a kind of crackling in his neck. For six months, the disease continued much in the same state, when he was removed to the Bicetre, in 1821. A tumour was now observed near the neck; and his head was bent a little forward. A blister had been applied to the back part of his neck. Such was the state in which I found him.

"There was a complete numbness over every part of his neck; but he felt a momentary relief when gentle pressure was made with the hand upon the tumour. The skin—of the upper part of the chest, nearly as far as the third sternal rib; that of the upper and lower extremities; and that of the trunk, as high as the epigastrium, all round—was the seat of constant numbness, accompanied by excessive itching, which the patient found it impossible to allay. Thus, all round the chest, there was an extent of about six inches (from the third to the seventh sternal rib) where the skin had preserved its natural sensibility. His urine and fæces were passed voluntarily, and his digestion was uninjured. In September, 1822, the upper extremities became weaker, the patient being scarcely able to move them, or to grasp any thing firmly with his fingers. The lower extremities were nearly in the same state. Respiration was in some degree confined. At length all these parts became gradually paralyzed, but still the skin retained its sensibility in that space of the chest, which I have already mentioned. The patient died on the 31st December, after an extensive gangrene had taken place on the sacrum and left trochanter.

"*Dissection.*—The substance of the brain was pretty firm, but without any injection of the vessels worth mentioning. About half an ounce of muddy serum was found in the left ventricle. The second cervical vertebra was enlarged outwardly and inwardly; the two first lumbar vertebræ, and their articular cartilages were diseased; and about an ounce of limpid serum was found in the cavity of the spinal arachnoid. At all these diseased points, the dura mater was thickened, and the pia mater more vascular than usual; but opposite the second vertebra of the neck, there was a depression of the spinal marrow, nearly five lines in length, and about a line broad in its centre, but insensibly diminishing in breadth at the sides. Its depth might be about half a line. Under this depression, the spinal matter was softer than usual, but not otherwise altered. In other parts the cord was softened, particularly at the lumbar protuberance, where its white and cineritious parts were quite destroyed, and had almost become liquid; yet the nerves, which corresponded to these altered parts, had pre-

served their natural dimensions. The softened points of the spinal marrow corresponded exactly to the parts which had been the seat of the painful itching, and of the palsy which had succeeded it; and it was not without astonishment I saw the marrow perfectly sound in the situation which was connected with the circular space on the chest, where, during life, I had observed that the skin retained its sensibility."—pp. 192-7.

Compression may be occasioned, also, by caries and displacement of the bones—by internal tumours, and by dilatation of arteries in the neighbourhood of the marrow; examples of all which may be found in books; and our author has himself given some. The enormous dilations which, in old people, are so often found in the veins of the spine, and in some of the spino-medullary veins, will also produce a slow compression; and may not tardiness of motion, in such persons, be partly owing to this cause? But an effusion of any kind in the cavity of the spinal arachnoid, the presence of acephalocysts, without or within the membranes, and the gradual development of tubercles in the substance of the marrow or its membranes, may occasion its compression.

"When compression is beginning to exist, a kind of numbness is often felt at first; afterwards there is a convulsive retraction of the limbs, and at length palsy. It is principally, where compression is the result of caries of the vertebræ, that we find these latter symptoms supervening, and they seem to be occasioned by inflammation of the membranes, which frequently exists in this case. When convulsions take place, with retention of urine and fæces, instead of their involuntary evacuation, some authors are of opinion, that the disorganization of the marrow is only partial; but they imagine that its destruction is complete when there is palsy, though not unfrequently there is compression, when no symptom indicates its presence."—p. 220.

Sudden compression is, in general, mortal; especially when there is a complete loss of feeling and motion, immediately after the accident. The paraplegia, also, which results from chronic compression, is incurable.

"When compression of the spinal marrow is evidently the result of a fracture, with depression of parts of one or more of the vertebræ, we naturally conceive," says M. Ollivier, "that the first indication is to remove the compression, by raising the pieces of bone that have been depressed. This operation, which had been so often performed on the skull, had never been attempted on the spine, when Mr. Cline, junior, practised it, in 1814, at St. Thomas's Hospital. The attempt was unsuccessful, and the patient died the day after the operation."

It was performed again in the same Hospital, with partial, but momentary benefit.

We give our author's remarks on the cure, and we may observe, that a great part of it will apply to wounds and contusions of the spinal marrow.

"When the sudden compression of the spinal marrow is accompanied by violent contusions, and when the patient is of a stout make, it is always useful to begin with general blood-letting, with the view of guarding against local congestion, the effects of which cannot but be hurtful; and we employ, afterwards, the ordinary method of cure, by derivation. When compression is the consequence of a certain alteration of the osseous texture, and occasioned by rickets, scrofula, or syphilis; these are the diseases which must be attended to. Compression, occasioned by internal aneurism, hydatids, tubercles, &c., is commonly incurable; even if there were symptoms which certainly indicated them."—p. 225.

The fifth chapter is employed on concussion of the spinal marrow. It is occasioned by falls, or blows on any part of the spine. It is sometimes accompanied by an effusion of blood on the surface of the spinal dura mater, or infiltrated through the loose cellular texture which covers the membrane; or, when concussion is the effect of a blow on the spine, there may be only a single mass of coagulated blood, which depresses the dura mater opposite to the spot which had been struck. Sometimes the pia mater of the marrow is burst in one or more places; and sometimes both the dura mater and arachnoid are similarly affected; and, in some cases, there is a hernia of the spinal marrow; all the three membranes may, also, burst at once. Effusions of blood are also found in the cavity of the arachnoid, when vessels have been ruptured by the concussion. When an alteration takes place in the marrow, it generally becomes softer, tending, if the patient live some time, to a lucid state; its colour is of a yellowish grey, the white and cineritious portions are indiscriminately blended; and sometimes the capillaries which cross it, are seen in an inflamed state. The vessels of the pia mater, also, where that membrane covers the diseased part of the cord, are fuller of blood than ordinary. Among the cases given by M. Ollivier, we particularly refer the reader to the curious case of Clotilda Frison, which occurred at the Hotel Dieu of Angers.—p. 229. In some cases the concussion appears to have exerted its hurtful influence only upon the sensibility, which emanates from the filaments of the sciatic nerves in all their extent, whilst that which depends on the crural nerves is preserved entire.

The symptoms resemble those occasioned by wounds of the spinal marrow. Convulsions are sometimes present.

"In some cases," says our author, "the palsy, which at first had been confined to the lower extremities, insensibly mounts up

again, and produces death, when the general state of the patient gave a hope of recovery. When the concussion has not been very great, the symptoms, on the contrary, gradually abate; feeling and motion again make their appearance by degrees, sometimes in company; but feeling sometimes by itself at first, and thus the nervous and muscular functions are restored to their original integrity."—p. 248-9.

Recoveries are not uncommon, even where patients have fallen from a great height; while others have died in consequence of falling backwards off their own feet. Death generally follows a severe concussion of the upper part of the marrow; but when the lower part of it has been the seat of injury, life has been occasionally prolonged for months.

"In concussion of the spinal marrow—the first remedy is blood-letting; and, if the patient is of a robust habit, it should be repeated frequently. Local blood-letting, either on the part of the spine injured, or over its whole extent, is equally advantageous; of course, it should be less extensively employed, if the patient is of a weakly constitution; but, in place of leeches, frictions with an irritating liniment, dry cupping, and rubefacients may be substituted with advantage. But in every instance we should begin with a general blood-letting. When the symptoms continue, derivative remedies are likewise very efficacious. If there is retention of urine, the patient's water must be drawn off with the cathcter, and if he is constipated, glysters, slightly purgative, should be administered. Dry rubbing of those limbs which have been attacked with palsy, may likewise assist in restoring feeling, and the power of motion to the parts. The patient, besides, should be restricted to a low diet; and his ordinary drink should be diluting gruels (viranes.) Should there be a partial luxation of any of the vertebræ, we can do nothing more than apply discutient compression on the seat of the deformity, and recommend rest."—p. 251.

Such is the treatment recommended by our author, which, in a similar case, would readily suggest itself to any man moderately acquainted with his profession: and which, possessing so little novelty, we should apologize to our readers for inserting; did we not conceive it to be our duty to give them an idea of the author's practice in his own words.

The effusions observed in the spinal canal, which M. Ollivier treats of in his sixth chapter, are either sanguineous, serous, or gaseous. They may exist on the outside of the dura mater, or in the cavity of the serous membrane which envelopes it and the pia mater; and in some cases they are found, at the same time, betwixt the arachnoid and the pia mater: or they may exist in the interior of the spinal marrow. Our author never knew a sanguineous effusion occur here spontaneously; it is ge-

nerally the consequence of external injury. Sometimes the blood effused is in such quantity, as not only to fill the canal, but to ingurgitate into the cranium. Vessels spontaneously ruptured at the base of the brain may produce it very suddenly; and such effusions into the spinal canal are by no means uncommon. *Primitive* extravasation of blood, however, may occur not only in the spinal arachnoid but in the inside of the cord itself, similar to that which in the brain forms apoplexy; but, as yet, it has been met with only in its upper portion. In the cavity of the spinal arachnoid we frequently meet with serum in various quantity; indeed it is always more abundant there than in other serous cavities, in proportion to the extent of the membrane. The serum is sometimes yellow and limpid, or whitish, or muddy; but it is rarely flaky, although it is pretty often bloody. It generally fills only the lower part of the canal; but it is diffused through its whole extent: it constitutes *hydrorachitis, or spina bifida.* In hump-backed patients the cavity of the arachnoid contains much serum. Sometimes an accidental injury of the membranes will occasion a very rapid and abundant exhalation of serum. It is sometimes the consequence of hydrocephalus; but there can be no doubt of its often existing as a primitive disease. In a portion of the canal the medullary substance may be slowly absorbed and replaced by a serous fluid filling the cavity of the pia mater.

There is no symptom which points out with certainty the existence of an effused fluid in the spinal arachnoid; far less any by which we can ascertain the nature of the fluid. We can merely form a probable conjecture from an attentive examination of the case. But what our author calls ascending and descending palsies, are supposed to have often some connexion with effusion into the spinal cavity. The remedies he speaks of in this case, are not materially different from these recommended in concussion, &c.

Speaking of gaseous effusions, our author observes—

"I have never noticed a single particle of air in the cerebral arachnoid of those subjects, in whom I had detected it in that of the spinal canal; yet we may readily conceive that these two phenomena may depend on each other. It is not uncommon to find the lumbar portion of the membranous canal, more or less distended by a gaseous, inodorous, colourless fluid; and which cannot be attributed entirely to putrefaction. In a woman, sixty-five years old, who died of chronic peritonitis, I found the lumbar region of the canal very much distended by a gas, which escaped instantly upon my puncturing the dura mater, when the turgescence of this membrane gradually subsided. The luminous texture under the arachnoid, which covers the roots of the lumbar nerves contained a prodigious quantity of very

fine air bubbles, which floated above the limpid serum effused into this part of the canal. The vessels of the spine were not injected. This woman had been dead twenty-two hours: the body, which was very fat, showed no mark of approaching putrefaction. It was in the beginning of October, 1822. In the same subject I found an emphysema of the cellular texture, lying under the mucous membrane of the stomach."—pp. 290-1.

M. Ollivier has also found air collected under the spinal dura mater in children; and in one man and one woman, betwixt the arachnoid and the pia mater; in all of which subjects, the dissection had been made within twenty-four hours after death, and in February and March. M. Ollivier thinks that this separation of air is independent of putrefaction, but he cannot say whether the kind of disease has any effect in its production. He detached it after hydrocephalus, tubercular phthisis, a cancer of the womb, and pneumonia. Bonetus and Spielenberg, are the only authors who have given instances of it.

In the seventh chapter we have an account of arachnitis, or inflammation of the arachnoid.

"It is very seldom that we find," says M. Ollivier, "the inflammation of the membranous coverings of the spinal cord confined to the vertebral canal alone. Inflammation generally, at the same time, attacks the coverings of the brain. For the most part, the arachnoid which lines the dura mater of the spine, and lies over the pia mater of the cord, is covered by a whitish opake exudation, something like a membrane; more or less adherent, and of variable thickness and consistence, and which is found sometimes in the whole length, and sometimes only in a portion of the fibrous canal of the spine, occasionally blending together all the roots of the lumbar nerves. Puriform matter has been found several times betwixt the arachnoid and the pia mater, as if it had been exhaled, not in the cavity of the serous membrane, but on its exterior surface. Serum is, for the most part, contained in the arachnoid; and there may be even an acute dropsy of this cavity. It sometimes appears of a violet-red colour, occasioned by the injection of the vessels which lie under it; and it appears thickened. Sometimes we find insulated spots which exhibit evident traces of local inflammation; and they are oftenest seen where there has been caries of one or more vertebræ; indeed they are seldom met with, unless there be some disease of the spine. At times the arachnoid shews no mark of inflammation, but its cavity is filled with fluid blood, the product of accidental exhalation. Its inflammation does not always extend to the interior of the membranes of the cord; but in general, all their vessels are more or less injected. With inflammation of the membranes, that of the spinal marrow itself may, or may not exist. As yet anatomical research has not been able to detect vessels in the arachnoid; and yet all authors speak of its inflammation. Is it not probable that the vessels which lie under it, have been mis-

taken for its proper vessels? It is very seldom that we find it thickened. In an insane person, I once found it very considerably thickened, from the interior union of the arachnoid and the pia mater of the marrow, and extending to the length of three inches below the cervical protuberance. The union of the two membranes formed a whitish and opake surface. I have several times observed partial injections, which, on a superficial examination, might have appeared to be in the spinal arachnoid; but, on separating it from the dura mater, it was easily seen that the injected vessels were situated under the serous membrane, the thinness and extreme transparency of which allowed the minutest branches to be readily distinguished." —pp. 295-8.

Hippocrates seems to have described this disease under the name of pleuritis dorsalis; though his prognosis is not conformable to that of modern times. Its symptoms are often combined with those of cerebral arachnitis; yet it seems to have two pathognomonic symptoms, one or other of which is always present, if they do not appear in company. The one is a general contraction of the muscles of the posterior part of the trunk, varying from simple muscular rigidity to perfect opisthotonos; the spine in its whole length forming a kind of inflexible bow. In cerebral arachnitis, the cervical portion of the spine may be affected in this way, but never the whole of it. The other symptom is a pain in the region of the back, extending all along the spine, but severest at the place where the inflammation is most acute. This pain is, as it were, irregularly intermittent; but it is never entirely absent: indeed, in most cases, it is extremely violent. These two symptoms render the movements of the patient very painful; and at times there is a degree of pain and stiffness in the lower extremities, with rigidity of the arms and hands, and locked jaw, convulsions, or palsy, and difficult panting respiration. The face also may be flushed, and the pulse quick and various; febrile symptoms may be present.—Tetanus cannot always be ascribed to inflammation of the spinal membranes, though they have been found influenced in some cases of traumatic tetanus. M. Janson says that the palsy of the interior extremities in distortion of the spine does not depend so much on the curvature of the vertebral column, at the moment when the distortion becomes evident, as on the inflammation of the cellular texture in the spinal canal; and this he thinks is agreeable to his experience. In such a case, he has also found the spinal marrow and its flattened membranes inflamed.—

"It seems to be the universal opinion," our author observes, "that death is always the consequence of arachnitis; yet would not the thickening which I observed in the body of an insane person, and which was evidently the result of an old inflammation, argue that

arachnitis may be cured to a certain extent? It is rapid in its progress, but it is difficult to fix its exact duration. In one case it was found to last about thirty days, though a patient has been known to die on the third day; but we can come to no positive conclusion on this subject: our observations as yet, have been but very limited. Can it become chronic? We are acquainted with the particular causes which are most apt to produce it. The sex and age of the patient seem to have no effect in predisposing to it. Severe contusions and fractures of membranes produce it; violent exertions may dispose to it; and it is often occasioned by caries of the vertebræ."—p. 318-19.

"In the very commencement of the disease, we must have recourse to free and repeated general blood-letting; particularly in young and vigorous subjects; but these should not prevent local blood-letting, particularly with leeches. These last should be applied in great number, all along the vertebral canal, and on both sides of the projecting part of the spinous processes. The whole body, also, should be placed in a bath, and each time it is used the patient should remain in it for several hours. At first, ulcerative remedies are thought to be improper; but when the disease has lasted some time, it is likely that they may be of service. The nature of the disease imperiously demands the strictest diet; the patient, therefore, should be made to drink freely of diluting, or emollient ptisans, or gruels."—p. 320.

Myelitis or Inflammation of the Spinal Cord

Diseases, according to M. Ollivier, have been described under this name, which seem to have been simple arachnitis. In myelitis the substance of the marrow is generally softened; to a certain extent disorganized; and sometimes converted into a yellowish fluid resembling pus. Sometimes the cord is softened in its whole thickness; sometimes in one of its central halves only, to a variable extent; and at other times, this is more evident on the side of its posterior, than its anterior aspect, and *vice versa.* The cord may also be softened in its cephalic, or in its cervical, dorsal, or lumbar portion; and at the place where the softening exists, the volume of the cord may be increased. This state M. Recamier and others have regarded as a particular alteration of the nervous system, altogether independent of inflammation, but in most cases, there can be no doubt of its being the result of inflammation. Besides, it has been observed, that of all the parts of the spinal cord, the lumbar protuberance is the part which is most frequently softened and disorganized; and next to it, in this respect, is the cervical protuberance: and it is in these two parts of the cord where the greatest quantity of cineritious matter exists, and where, consequently, blood

vessels are most numerous. M. Dupuytren has observed the same thing in horses. Softening of the brain, also, takes place, most frequently, in its cineritious substance. In the nervous system, the result of inflammation is the softening or hardening of its substance. When thus hardened, the nervous texture resembles the white of a hard-boiled egg, but no vessel is seen to penetrate its centre; neither, in many cases, have the membranes indicated any change resulting from inflammation.

"In a young girl, 23 years of age, says our Author, who had been attacked with epilepsy, for the first time in 1814, and whose body I opened in 1822, the consistence of the spinal cord in its whole length, and when separated from its membranes, was so great, that I could not, without difficulty, crush it betwixt my fingers, even when I pressed it strongly; and here there was no trace of inflammation, either in the membranes, or in the nervous texture. If such a state rise from inflammation, it must have been of the chronic kind, for it has been found only in persons who have long laboured under nervous complaints. But, on the contrary, the softening is the consequence of acute and rapid diseases."—pp. 325-6.

M. Ollivier has given the history of six cases of softening; one of hardening; and another, a disease of the spinal marrow, the subject of which is still living.—p. 342.

Symptoms.—They are not easily distinguished. The most constant is a sharp, deep-seated pain, accompanied by a feeling of pungent heat over the whole length of the spine, and which motion renders much more severe. According to Klohss, it is much increased when the patient lies on his back on a feather bed instead of a mattress; but pressure never renders it more acute. To the pain of the back, which may exist only in a part of the vertebral column, is added a state of stupor, accompanied by troublesome prickings (fourmillemens) in the lower extremities, and this stupor is more or less complete, in proportion to the rapidity of the inflammation. An involuntary excretion or retention of fæces and urine are generally in some degree present. Sometimes the palsy is observed to proceed from below upwards, till it stops the breathing and causes death by asphyxia, but sometimes, (more rarely indeed,) it follows an opposite direction; sometimes there is palsy of motion only, the patient preserving the power of feeling; sometimes feeling alone is abolished; but these differences depend on the part of the marrow which is the seat of *disease* (alteration). For the most part, the palsy appears at first only on one side of the body, afterwards in both. On some occasions the limbs are subject to convulsions from the beginning, which are succeeded by palsy.

Sometimes they are permanently contracted and painful; at other times they are quite flaccid.

"M. Janson supposes that palsy without contraction, is a proof that the nervous texture alone is inflamed; whereas the presence of contraction shows that inflammation has also attacked the membranes of the cord. The pulse, for the most part, is frequent and irregular. To these, which in so far may be considered as the pathognomonic symptoms of myelitis, several others are sometimes added; such as tetanus, trismus, loss of voice, difficulty of swallowing, dyspnœa, &c. But these symptoms do not appear till the disease has reached its highest degree of intensity. At times the eye is extremely sensible to light, and the ear to sound, but the patient never becomes blind or deaf. These last symptoms evidently arise from irritation of the brain or its membranes. But there is never any very apparent injury of the intellectual functions. Neither do we observe in this disease, stiffness, and crookedness of the spine, as in spinal arachnitis, a symptom which sufficiently distinguishes the latter from myelitis."—pp. 349-50.

If the part affected is the upper region of the marrow, at no great distance from the annular protuberance, there is often then confusion of the senses; furious delirium; locked jaw; grinding of the teeth; a red dry tongue, difficulty of swallowing, inability to speak; hurried and confused breathing; vomiting, &c.; palsy of the whole body; speedy death; with the phenomena of asphyxia. Symptoms of hydrophobia also have been sometimes noticed. When the cervical portion is the seat of inflammation, there is often complete rigidity of the muscles of the neck, and in the upper extremities, which are sometimes convulsed, at other times palsied. Respiration is then, for the most part, laborious and very painful, and is performed only by the diaphragm. When the disease is seated in the nervous substance of the dorsal portion, betwixt the two protuberances, the trunk is agitated by convulsive and incessant shocks, which do not affect the limbs, unless the disorganization occupy a part of the protuberances. Breathing is short, hurried, and diaphragmatic; and there are palpitations and irregular pulsations of the heart. To these symptoms M. Pinel, junior, adds the almost complete annihilation of the functions of the nervous system, and a general state of fever denoted by an excitement of all the functions.

"When the lumbar portion is attacked, or rather the inferior protuberance of the spinal cord, then we have palsy of the lower extremities, involuntary excretion or retention of the fæces and urine, and a deep-seated pain confined to the region of the loins. Priapism, more or less complete, has also been observed, particularly, if the disease has been the consequence of a blow or a fall;

and fits of epilepsy have been present in cases where a pultaceous softness of the spinal cord hasbeen observed after death. The more extensive the inflammation, the more numerous are these symptoms. When the disease is chronic, there is in general little pain. But we may suspect its presence where there is palsy of the limbs, and disorder in the functions of the bladder and rectum; and they make their appearance gradually. There have been instances where palsy has never shown itself; but such cases are rare." —p. 352.

The course of myelitis is rapid or slow. The patient sometimes dies on the third or fourth day, and sometimes not till the eighteenth. Its duration in the chronic state is uncertain. Myelitis may be cured, but it generally terminates in death.

It is generally the result of external causes; such as violent exertions, falls, blows given to the spine, changes in the vertebræ; whether from external violence, or rickets, scrofula, &c., and exposure to the sun in hot weather, according to Bergamaschi. The disease rarely proceeds spontaneously from an internal cause; though this author speaks of its being produced by the retropulsion of an erysipelas or a rash; and by a neighbouring inflammation; that of the brain, for instance, spreading to it. M. Ribes and Frank, think that it is often brought on by rheumatism. Its remedies are nearly the same as those for spinal arachnitis. In the chronic state, we should use topically irritating applications, aromatic fomentations, *douches* of water a little soft, and of the temperature of 30 or 40; and the other means recommended for chronic arachnitis. The feelings of the patient indicate the necessity of rest.

In the ninth class, we have an account of the morbid textures which are produced in the membranes of the spinal marrow, or in its substances. The morbid textures which make their appearance in different parts of the body are of two kinds: the first, which are called *transformations*, are analagous to some of the natural textures of the animal economy; and the second, which are not so, are new productions. As yet, two only of the first kind have been observed in the spinal membranes—viz. the cartilaginous and osseous textures. Among those of the second kind, tuberculous matter and animated foreign bodies are the only ones which have been as yet detected. In the body of the spinal arachnoid, we find pretty often small plates of an opaline white; of an irregular form; rarely more than three lines in diameter, and gradually diminishing in thickness from the centre to the circumference; and, therefore, they are much more opake in the centre. They are rarely found in the membranes of the cervical portion of the

marrow. If they are numerous and small in size, the spinal marrow, when we cut into the dura mater, appears to be covered by a limpid fluid; in the midst of which, a great number of small bits of white soap seem to be floating; and this deception is occasioned by the extreme transparency of the arachnoid. On the side next the marrow, these plates are rough, though smooth and polished on the outside. But for a more particular description, we must refer to the work itself. They exactly resemble the cartilage of other parts; and when they are dried along with the arachnoid, they almost equal it in transparency. M. Ollivier has found no well authenticated case where these plates were osseous; he has several times seen the external surface of the spinal dura mater with asperities really osseous, when there existed a caries of the vertebræ; and they were opposite to the diseased portion of the bone, at which place there was generally a purulent fluid, in greater or less quantity. In one case he found the dura mater separated to the extent of about three inches from the body of the cervical vertebræ; its corresponding surface being covered with small osseous asperities; but with the effusion of pus. When there is a scrofulous cancer of the spine, it is not uncommon to find tubercular matter in the substance of the spinal membranes. Sometimes the matter is, as it were, infiltrated into the texture of the membrane; at other times it forms an insulated kernel; in a word, a tubercle, surrounded by its own covering. These tubercles are also formed in clusters, and thickening the membranes, are thus capable of pressing upon the spinal marrow. But tubercles are sometimes present when there is no affection of the bone. In a child, which died of tuberculous phthisis, M. Gendrin found a softened tubercle betwixt the spinal dura mater and arachnoid, at the left lateral part of the base of the cranium, near the occipital foramen. Its size was that of a small nut. Nothing during life had marked its progress. Although tubercles are frequent in the substance of the brain, they have not been found in any other than the cervical portion of the spinal marrow; at least there are but very few instances of their existence farther down. The symptoms which indicate the presence of tubercles are not well known; it is thought, however, that they sometimes produce epilepsy. It is not uncommon to find vesicular worms (hydatids) of the kind called acephalocysts, likewise in the osseous canal of the vertebræ and the spinal dura mater, or at least in the cavity of the arachnoid. They appear, for the most part, to have penetrated by the holes situated where the vertebræ unite, which are then enlarged, and communicate with a cyst

of greater or less dimensions, adhering to the body of these bones. Acephalocysts have never been found in the interior of the spinal marrow, though the kind of hydatid, called polycephalus, has been met with in the fourth ventricle, were so large as a hen's egg.

In his tenth and last chapter, our author considers those diseases, which, in the opinion of some authors, depend on an alteration in the spinal marrow, or its membranes. According to Alexander Tralles, and Galen, when palsy affects the limbs only, the seat of the disease is in the spinal marrow, or at least at the origin of their nerves; but, as our author thinks, this opinion is too exclusive, and not always agreeable to experience. Again, Hoffman has attributed epilepsy to an effusion of the cerebral membranes, and simple convulsions to some change in those of the spinal marrow; and M. Ollivier has found the latter opinion perfectly agreeable to fact. But in epilepsic patients, disease has frequently been found in the spinal marrow. In ten individuals of this description, M. Esquirol, found nine who were diseased in the *medulla oblongata*, and in many cases of epilepsy he has obtained much advantage from the application of moxa along the spine; chorea has also been attributed to diseased spinal marrow, but not on sufficient grounds. In tetanus, marks of inflammation have been found in the spinal marrow and its membranes; but in other cases, no change could be observed; yet it is rational to employ the same remedy for it as for arachnitis and myelitis. Brera, in a case of tetanus, from a contusion in the right thumb, applied 120 leeches along the spine, and gave Prussic acid with benefit, but the patient died; and on dissection, the spinal marrow was found inflamed on the side which corresponded with the original injury. The same thing has been observed in the locked-jaw of new-born children, and in hydrophobia. M. Ollivier and others, after those acute or chronic diseases which are called adynamic, have observed marks of inflammation or extravasation on the surface of the spinal marrow, or at the origin of the nerves; and the like has been noticed in petechial malignant fevers. After yellow fever, a good deal of serum has been found in the cavity of the spine. Ludwig has said, that colic pains which extend to the back, and those which arise from some kinds of hæmorrhoids, schirrus, and cancer of the rectum, and in difficult menstruation and in pregnancy, proceed from irritation of the spinal marrow. Pains, also, which attend the commencement of some fevers, he attributes to difficulty in the circulation of its vessels. When the viscera of digestion are affected, it is not

uncommon to find paraplegiæ supervening upon dysentery, for instance, and disappearing with the primary affection. Our author has several times produced a fatal tetanus in horses, by injecting into their veins a watery solution of nux vomica (strychnine); but on dissection, he never found any apparent injury of the spinal marrow; whether the tetanic affection lasted some time, or proved instantly fatal: here, tetanus is certainly not the result of inflammation. The symptoms of both are the same, but the proximate cause altogether different.

The palsy produced by excess of venery, the abuse of spirituous liquors, and similar causes, is often curable. It seems to depend on exhaustion of the nervous centre; and it is in palsies, which depend on this cause, that nux vomica appears to be of decided benefit. It rouses the spinal marrow from its state of stupor; but it often occasions violent pain in the palsied limbs, without producing the slightest change in the palsy of motion. This medicine, as yet, has been used only internally; but our author advocates its employment in the form of friction. The hydrocyanic acid has an opposite effect; it moderates the excitement of the cerebro-spinal system. It appears to be a sedative, without any of the bad effects of narcotics; but it is never useful, except when the nervous excitement does not depend on an apparent organic change. Our author here mentions the process by which M. Hufeland makes the distilled water of bitter almonds, which he considers as a useful mode of administering the hydrocyanic acid. In French measure, it is as follows:—

"Bitter almonds, 2℔.; alcohol, 2oz.; water, 6℔. We put the almonds, roughly powdered, into a retort with the above-mentioned liquids, and, by distillation, press over 2℔s. into the receiver: 24 drops of this water contain about a drop of hydrocyanic acid. The phial must be corked with emery, and kept in a dark, cool place."

We have thus given an abstract of M. Ollivier's work, which is not unworthy of a place in every physician's library; not certainly for its elegance of style, or its masterly execution, but on account of the valuable facts and observations which it contains. Many of the cases are compiled from preceding writers, but many of them are new; and from the care and patience with which they have been drawn up, we think their authors, among the list of whom we rank M. Ollivier, entitled to much praise. It is impossible to do justice to the work in the compass of a few pages; for to do that, we should have transcribed the whole volume. However, we have tried to select its most interesting parts. The extracts, which we have occasionally interspersed, are given in the author's own words,

except in a few instances, where we thought he was rather studying the mode of book-making, than brevity or persuasiveness of style. Yet he is not, in general, a diffuse writer; and he has committed so few other faults, that we can scarcely venture to criticise him. For many of the diseases he treats of, he has indicated nearly the same mode of cure; which would argue the inutility of distinguishing, accurately, betwixt the various inflammatory effusions of the spine. But accuracy, however apparently useless, must be always praiseworthy in medicine.

ARTICLE III. *Elements of the Theory and Practice of Physic, designed for the Use of Students.* By GEORGE GREGORY, M.D. London, 1823. 2 vols. 8vo. pp. 868.

The author of this work, Dr. George Gregory, graduated at Edinburgh in 1811, where he published an inaugural Dissertation, de Phthisi Pulmonali, written in a style of latinity, not unworthy of his illustrious uncle, Dr. James Gregory; and here we find him, nine years afterwards, publishing a volume on the practice of physic. In former times, a young physician might publish a dissertation on some particular disease, but few have ventured to write, without experience, on the whole range of medicine; at least, so did not Hoffman, Boerhaave, Lieutaud, and Cullen. The latter, we think, had practised forty years before he published his celebrated First Lines. However, some young men of great talent, among whom we may mention Fallopius, Baglivi, and Dr. James Gregory, have written, and written well, upon Medicine, at a very early period of life. Shall we include Dr. George Gregory among these gifted individuals? We will try to answer this question at the close of the present article. That a physician cannot write well upon a disease that he has never seen, we think every one, except his bigotted admirers, will acknowledge who has perused Cullen's absurd and very theoretical treatise upon scurvy.

Dr. Gregory imagines that a work upon the theory and practice of physic, is really wanted at the present day, in consequence of the vast improvements that have taken place in the science within the last twenty years, by means of the standard works of Bichat and Baillie; and on this account he has ventured to come forward with these elements. He does not pretend to have given new matter, but merely to compile, and his main object has been "to unite general views of disease with

the detail of symptoms and treatment." It is to these views, therefore, that we must chiefly attend, as they are in some respects the author's own; but we shall occasionally interpose his remarks on points of practice.

The work is divided into the two great classes of acute and chronic diseases; in describing which, however, disdaining novelty, he has contrived to follow pretty closely the nosology of Cullen. He, it seems, is one of those London lecturers, who has not adopted the variegated nosologies of Young and Good. In his introduction, pointing out what objects a physician should principally have in view in the examination of disease, our author makes the following observations, which are not very remarkable for elegance of expression; though, after pausing a little, we find no difficulty in comprehending their meaning.

"An enquiry into any *particular* disease," he says, "includes an account of the symptoms by *which* it is characterized, and in *particular* of those *which* distinguish it from other diseases, with *which* it is in danger of being confounded; of the appearances found after death, of its causes, and of the method of its treatment. Besides *which*, it is of great importance to ascertain, if possible, its *pathology*, that is to say, the seat and nature of the disease. This is always the most abstruse and difficult part of the enquiry, and though, even if successfully prosecuted, it does not always lead to practical results, yet it never fails to throw some degree of light upon this object of research; and where it fails to point out the means of relief, it often suggests the reason, why that is difficult, tedious, or impossible."

"In an elementary work on the theory and practice of physic, something more, however, is required than a mere detail of the individual diseases to which the human body is subject. I have already stated that they have not only their points of *dissimilarity*, but of *analogy* also, and it is an object of consequence to determine these analogies, to shew the great features of resemblance which all diseases bear, and to trace the almost insensible gradations by which they run into each other, and which enable us, either to view them as separate objects of enquiry, or as the closely connected members of a great family. This beautiful mixture of uniformity and variety in the phenomena of disease, presents one of the most formidable obstacles which a work of this nature has to encounter, and it can only be surmounted, and that partially, by occasional digressions into the obscure doctrines of GENERAL PATHOLOGY." Introd. iii, iv.

Entering now upon the proper subject of this work, Dr. Gregory begins with fever, and speaking of the cold stage, he observes—

"The duration of the cold stage varies from an hour, to two or even three days. Though often very slight it is never entirely wanting, and it is at all times to be carefully enquired for, and noted

by the physician, as marking the precise period of the accession of fever. This it is useful to know in all febrile diseases; but in some, as small pox and measles, it forms the basis of our prognosis."—p. 2, vol. 1.

It would be unfair to suppose that this is not known to every physician, yet it is often little attended to, especially by the junior part of the profession.

Passing over our author's accurate description of febrile phenomena, we come to his observations on the nature of fever, and his view of the theories of authors on this subject; but a cloud still hangs over it, which no medical luminary has, as yet, been able to dispel.

"The phenomena of fever," says Dr. Gregory, "give evidence of diminished energy of the brain, with increased action of the heart and arterial system; and the difficulty in the pathology of fever consists in showing, in what manner these disturbances of functions are connected with each other. The older pathologists supposed it was brought about by the *vis medicatrix naturæ*; for which, in modern times, we have substituted the principle of *re-action*, but the precise mode in which this re-action of the heart and arteries is effected, appears to be altogether inscrutable."—pp. 18-19.

Many of the phenomena of fever, he informs us, appear to be guided by the principle of *periodic movement*, as exemplified in the periods of utero-gestation and menstruation, &c.; and to this principle have been ascribed the *types* of intermittent, and the *crises* of continued fevers. The doctrine of critical days, our author is disposed to admit of, with some limitations; and he doubts if it is possible to *cut short* a fever. In the treatment of fever, the alleviation of particular symptoms is often matter of the highest moment.

Speaking of continued fever, Dr. Gregory observes, that

"The nosological divisions of fever are arbitrary, and calculated not to direct the method of cure, but to increase the facility of instruction.—Under circumstances the most opposite, fever often shews the most striking uniformity—the young and the old, the robust and the delicate, the active and the idle, the dissolute and those of regular lives, exhibit, when attacked by fever, the same series of symptoms."

But to speak of these symptoms would be, in this place, a useless labour; we shall, therefore, merely enumerate some of the most striking *post mortem* appearances, in our author's own words. Dissection shews that

"Danger is chiefly to be apprehended from the occurrence of inflammation.—The most common morbid appearance, in cases of

fever, is a gelatinous effusion on the surface of the arachnoid membrane. Occasionally serum is found in the ventricles; besides which, we perceive, in many cases, a fulness of the vessels of the brain, appearing as if they had been subjected to anatomical injection. Occasionally we meet with extravasation of blood, or the deposition of purulent matter. In the thorax we find marks of inflamed plura. Pus is sometimes found in the cavity of that membrane. In the abdomen there are occasional evidences of peritoneal inflammation, but the most usual appearance is that of ulceration, more or less extensive, of the mucous coats of the intestines."—p. 37.

After adverting to that species of debility which, in the commencement of fever, is often occasioned by an over-loading of the brain, he observes—

"Local congestions, however, occasionally take place in the progress of fever, as well as at its commencement. They have occurred even when the febrile symptoms have subsided, and the patient been considered convalescent. To decide whether the symptoms which then supervene, are referable to a state of oppression or collapse, is one of the most difficult points in the practice of physic. It can be effected only by a close attention to particular symptoms. The pulse is, for the most part, the safest guide; but the appearance of the countenance, the position of the body, and other minutiæ, which *clinical* observation can alone touch, assist materially in the decision of the question."—p. 38.

In treating of the causes of continued fever, our author attributes much to the agency of cold, and thinks that the stoppage, or obstruction of perspiration, which it occasions, very frequently gives rise to fever.

"There is nothing," he soon after adds, "improbable in the supposition, that what originated in cold may be afterwards propagated by contagion. It violates no established law of the animal economy. Experience, on the other hand, appears to favour it; and it may, therefore, be laid down as an important practical principle, that fever, which originated in the first instance from *common* causes, may, under certain circumstances, either of local situation or constitution of body, spread by contagion."—p. 45.

Our author, and we think he is right, is a strong contagionist; and he has proved, by quotations from Thucydides, Livy, and Plutarch, that the ancients were not unacquainted with contagion. Its nature, however, is another of Dr. Gregory's *inscrutable* things. He thinks that it may possibly operate on the brain and nerves; but he will not affirm that there is any thing sedative in its nature; yet he is

"Not insensible to the importance of the fact, that cases of disease, arising from *common* contagion, above all, continued fevers,

are more likely to be of the low or typhoid kind, than such as are attributable to cold, or other causes, independent of contagion."—p. 47.

He is of opinion, that a vitiated state of the air, the putrefaction of animal or vegetable substances, or a state of famine or scarcity, ought not to be enumerated among the *exciting* causes of fever; though such will, undoubtedly, forward its propagation when it is actually produced.

In no disease, he observes, is so much left to the discretion of the patient, as in continued fever. Active treatment in the majority of cases, even though early resorted to, is chiefly serviceable, not in shortening the course, but in moderating the *violence* of the disease. In the *endemic* of hot climates, no one can doubt of the propriety of blood-letting; and in this case it must be repeated, till the headache and fulness of the pulse are lessened. In doing so, he condemns the opening of the temporal artery.

"The objects for which blood-letting is instituted in the common continued fevers of this country, and in genuine typhus, are various. Some recommend it very early in the disease, in the hope of cutting it short at once. This is a fortunate result of the practice occasionally witnessed; but it is one which can seldom be anticipated. The legitimate object of blood-letting in these diseases, is the checking those dispositions to inflammatory action, which are so often met with in severe cases, which sometimes come on insidiously, and at other times suddenly; and are productive, in either way, of serious mischief to the affected organ. This applies with peculiar force to those conditions of the brain which are supposed to depend on congestion or *sub-acute* inflammation; for the delicacy of its structure exposes it readily to injury, and injury of the brain, even of the slightest kind, is always to be dreaded. It is frequently observed, that a judicious abstraction of blood in the early stages of fever, not only diminishes the headache, the great sensibility to light and sound, the delirium or the cough, or the pain and fulness of the abdomen; but it apparently shortens the course of the disease; and more obviously still, the period of convalescence."—p. 61.

In genuine typhus, the coagulum is commonly loose; an appearance which is supposed to contra-indicate the employment of blood-letting; but in a case of great oppression of the brain, amounting almost to apoplexy, though connected with the *invasion* of fever, Dr. Gregory once saw the most marked good effect from general blood-letting; and yet the blood drawn, scarcely coagulated at all.

We must now notice some of our author's sentiments, with regard to the other remedies of fever. He prefers sponging

with tepid or cold water, to the cold affusion in the fevers of this country; antimony, he thinks, proves useful in fever, apparently by some power of diffusing and equalizing the circulation; purgatives, he recommends during the whole course of fever; but the indiscriminate use of stimulant remedies he disapproves of, as likely to aggravate local determinations.

"But in the state of true collapse, marked by cold and clammy sweats, a feeble wavering pulse, oppressive breathing, the supine posture of the patient, and the moist, brown, and loaded state of the tongue, stimulants, especially wine and brandy, are not only beneficial, but absolutely necessary."

Fevers, too, which are accompanied by what have been called symptoms of putrescency, are benefited by the speedy and moderate exhibition of wine, bark, and aromatics. But in cerebral irritation, those are improper; indeed, as our author very properly observes, wine is at most times a doubtful remedy in fever, which should never be persevered in, unless the signs of improvement are very unequivocal. It is seldom that opiates are admissible in any stage of continued fever.

We shall close Dr. Gregory's chapter on continued fever, with his remarks on blisters:—

"It is generally agreed," he says, "that blisters are only useful in obviating those local congestions and inflammations which occur in the course of fever, and more particularly within the head, bringing on that cerebral irritation which is marked, sometimes by delirium, accompanied by much restlessness, and attempts to get out of bed; and occasionally by the opposite, but no less formidable symptom of *stupor*. Under these circumstances, great benefit is experienced from the application of a blister to the nape of the neck; besides which, the head should be shaved, and cloths dipped in a cold lotion, constantly applied to it. In case of local determination to any organ of the thorax or abdomen, a blister over the affected part will prove equally advantageous."—p. 68.

Our author next enters on the consideration of the plague, which, in his opinion, differs from typhus, only in having its origin from a *specific* contagion. Intermittent and remittent fevers follow. In this country, he observes, and in Holland, ague, is not a disease of danger; but at Sierra Leone, and along the neighbouring coast, it is scarcely exceeded in malignity by any known disorder. It is always difficult to be removed, in proportion to its duration; after a person has been exposed to marsh miasmata, the *latent period* extends from a few days to some months; and these miasmata, under particular circumstances, may arise from almost any soil:

agues may even prevail where there are no marshes; but then something will be found in the situation, equivalent to a marsh.

The most generally successful means for the cure of agues, consist of bark and arsenic. But when an inflammatory diathesis prevails in the system, where the primæ viæ are disordered, or the liver and spleen obstructed, and other diseases present, bark will not have the beneficial effect expected from it, unless the above named obstacles are removed. Arsenic is best given in the form of liquor arsenicalis, in the dose of five drops, gradually augmented. Should it produce nausea or vomiting, its exhibition must be suspended, and a few grains of rhubarb given. The best mineral substitute for it, is the sulphate of zinc, in doses of one or two grains, three times a day. To our author, ague, in its nature, is quite *inscrutable*, for his theory of it is summed up in the following instance:—

"As we are altogether unacquainted with the manner in which marsh miasmata produce agues; so, in like manner, must we profess our ignorance of the exact *modus operandi* of our febrifuge medicines."—p. 92.

However humbling such a confession may be to the pride of human genius, we are better pleased with Dr. Gregory for having made it, than if he had favoured us with two or three pages of ingenious and elaborate nonsense on the subject.

The author has condensed, in a luminous, though an abridged form, all the most useful information concerning the yellow fever; but we can find room for no more of it, than his remarks on the treatment of the disease.

"The great object," he says, "is the allaying that excessive irritability of the stomach, which leads to the black vomit. Calomel, given at first, in a smart dose, so as to operate freely as a purgative, and repeated in smaller doses at intervals of three or four hours, so as to keep up the effect, was the most approved practice among the English practitioners, at Gibraltar, in 1813. Along with calomel, were occasionally united aloes and gamboge. In the exhibition of those medicines, no time was to be lost; for it was only by their speedy and full effect, that the prevention or relief of the vomiting could be ensured. Pediluvia and tepid sponging, were found to be beneficial. Under certain circumstances, the warm bath even was administered with good effect. Cold applications to the forehead and hands, occasionally served to relieve the urgent headache. When the powers of life appeared to fail, it is unnecessary to say that stimulants and cordials were had recourse to. Subacid drinks were given, and a strict antiphlogistic

regimen pursued through the whole course of the disease. The same rigid attention to diet and regimen were required during the period of convalescence."—p. 104.

In his preliminary remarks on the exanthemata, Dr. Gregory observes :—

"The regularity in the *course* of exanthematous fever, is well shewn in the three days of the eruptive fever of variola, and the eight days of its fever of maturation. These curious facts form a striking illustration of the doctrine of critical days in fever.—It is a singular circumstance, that this corroboration of the doctrine of critical days should not have been known till above a thousand years after that principle in pathology had been inculcated."—p. 111.

The specific contagion of the exanthemata is another of our author's *inscrutables;* and all that he pretends to know of it is, that it is of a very subtile nature!

"The multiplication," he remarks, "of the morbid poison, in the body of the affected individual, is wholly inexplicable. The older physicians applied the analogy of vegetable ferments to the explanation of the phenomenon, and certainly with much ingenuity. The doctrine of a *materies morbi,* is satisfactorily proved in the case of small-pox, cow-pox, and syphilis; and the old humoral doctrines have doubtless, therefore, some foundation in nature. Whether they can be extended, so as to explain the phenomena of some corresponding affections, and perhaps of some others, whose pathological relations are not so obvious, may, in future times, become an object of enquiry."—p. 115.

The uniformity in the *latent period* of most of these contagions is extraordinary; it appears to be as accurately defined as the periods of the fever.

It is a striking feature in the history of exanthemata, that they are not compatible with the presence of each other, or of any other disorder. This is certainly an important principle, and it may, perhaps, be illustrated by the well-known fact that during the prevalence of an epidemic plague, or yellow fever, (the one notoriously, and the other very probably arising from specific contagion,) all other diseases disappear.

"The pathology," says Dr. Gregory, "of the eruptive febrile diseases is confessedly as obscure as that of the simple fevers; but, latterly, an attempt has been made to clear up some of the difficulties in which it is involved, by shewing that disease of the great mucous membranes of the body is implicated in them, as intimately, and to almost as great an extent as the skin itself. The structure and functions of the skin and mucous membranes bear a close resemblance to each other, and many pathological considerations tend to prove that there exists, also, a very close analogy in their diseases. It would be a rational conjecture, therefore, that

in fevers, where the skin is extensively concerned, the mucous membranes would participate, and observation favours the opinion. The principle appears to be of very general application, and is illustrated not merely by the symptoms which the different exanthemata present in their different stages, but by the appearances also found after death. There is reason to suspect, that upon this intimate connection between exanthematous fevers and disease of the mucous membrane, depend several of the most important varieties and anomalies which have been observed; such, for instance, as the recession of the eruptions, and the occasional occurrence of the disease a second time."—pp. 118-19.

We must pass over many sensible remarks on small-pox, cow-pox, measles, scarlet fever, and the minor exanthemata, (on the latter of which Dr. Gregory is rather superficial,) and say a few words on inflammation. The pain attending it appears to be proportioned rather to the facility of distention of the part in which it is seated, than to the quantity of nerves distributed to the part. Heat is the least essential symptom of inflammation;—there is reason to believe, that when the internal parts are inflamed, the heat is not augmented. But, increased redness, which is owing to the enlargement of old vessels, or the growth of new ones, is nearly decisive of the existence of inflammation. Some structures of the body inflame without swelling. Neither is pain essential to inflammation. But inflammation hardly ever exists in an organ without disturbing its function. The extent of fever, in inflammatory cases, seems often to depend on peculiarity of constitution. Some persons argue, that this fever is not always a secondary affection; as they are not able to conceive how it can be excited by the swelling of an inconsiderable gland, as in cynanche tonsillaris. But on a subject so well known, we must say little; though before concluding it, we shall make one or two quotations, and begin with our author's remarks on metastasis, or the translation of inflammation from one organ or structure to another.

"This is a very curious point in pathology, sufficiently established, indeed, as a matter of fact, but the reasonings concerning which are hitherto very obscure and imperfect. It is exemplified in the ophthalmia which succeeds gonorrhœa; in the inflammation of the testicle, which succeeds the mumps; in the inflammation of the pericardium, which succeeds rheumatism. In what manner the metastasis is effected, has never yet been developed. It appears, however, that to *sympathy from similarity of structure*, something may be referred; for, in almost all cases of metastasis, it will be found that the structures primarily and secondarily affected have an affinity to each other."—p. 130.

We regret, that we cannot follow Dr. Gregory in his account of the inflammation which attacks the skin and cellular texture, and the serous, mucous, and fibrous membranes; but we cannot avoid copying his remarks on the theory of inflammation:—

"Many theories of inflammation," he says, "have been proposed; many attempts, that is to say, have been made to explain the precise nature of inflammatory action. But inflammation is an action peculiar to life. It is on a par with secretion and absorption; and if we cannot unfold the nature of the healthy vital actions, it is not surprising that pathologists have failed in explaining those which occur in disease. It is pretty well agreed, that inflammation is a morbid action of the capillary vessels. This portion of the great circulating system appears to act a very important part in almost all the operations of the animal body. The capillaries are probably the organs mainly concerned in secretion, and the growth of parts, and possibly, also, in absorption; but the whole subject of the functions of the capillary system is exceedingly obscure. Bichat appears to have considered it as altogether beyond our reach. Uninfluenced by those considerations, many modern physiologists have attempted to define accurately the state of the capillary vessels during inflammation. Some imagine they are in a state of increased action; others believe that in part of their course, at least, there is a spasmodic constriction; while a third class of pathologists maintain, that during inflammation, the action of the capillary vessels is diminished. Into the merits of these different theories, I have no intention to enter. The theory of *increased action* of the capillaries is, upon the whole, that which is likely to prove the most useful guide in practice."

From the above extract, it will be seen that our author is a plain matter of fact man; of a meek and chastised imagination, and never expatiating in the airy field of fiction. Perhaps we may style inflammation the plastic power of nature run mad; *that is to say*, to use an elegant and favourite phrase of Dr. Gregory's, excited beyond its equilibrium, or perverted to a wrong purpose.

In his account of chronic inflammation, which immediately follows, our author seems to have collected all that is known on that obscure subject. Here, it is probable, there is a *relaxation* of vessels, rather than increase of their tone. Its treatment is very little understood; and it is almost as much out of the controul of medicine, as active inflammation is under it. In most instances the prognosis is unfavourable.

Phrenitis and hydrocephalus, Dr. Gregory, includes in the same chapter. Contrary to the opinion of some eminent practitioners, he is "satisfied that many cases of genuine hydrocephalus have been recovered by judicious treatment, which (on that

very account, perhaps,) were considered to be only disordered states of the primæ viæ." It is a matter, however, of great moment, that our diagnosis of this disease should be a correct one; and on that account, Dr. Gregory enters on the subject at some length. He is inclined to think that in some respects it differs from pure phrenitis.

"It is commonly stated," he says, "that the first stage of distinct hydrocephalus is one purely of increased excitement of vessels, and that serum is not effused until the pupils are dilated, or strabismus, or the slow pulse comes on. This piece of pathology has always appeared to me to be doubtful. I am inclined to think, that the vessels of the brain throw out an undue proportion of water even from the very first, and that the symptoms of *compression* which mark the advanced stages of the disease are owing to the *accumulation* of water in the ventricles, rather than to incipient effusion."—p. 208-9.

From our author's chapter on ophthalmia, we extract nothing; and from that on catarrh, sore throat, and mumps, we copy merely his remarks on the influenza.

"It is probable that the contagion (of influenza) is of a very diffusible nature—that the contagious effluvia will float to a considerable distance from the infected individual. It appears further, that its latent period is very short, perhaps not exceeding a few hours. On these principles we may account, in a manner sufficiently satisfactory, for the anomalies which the history of influenza presents. The circumstance of its travelling from the most distant parts of the world, and resisting in its progress the extremes of European heat and cold, is conclusive as to its being something more than a common catarrh, produced by variations of atmospheric temperature."—p. 225.

We are sorry to observe, that Dr. Gregory can say nothing satisfactory on that most vexing complaint, chronic enlargement of the tonsils; indeed it is another of his *inscrutables*.

Speaking of the treatment of laryngitis, our author observes:—

"Large bleedings are required, and at the onset they should be pushed, so as to produce fainting. Leeches may be applied to the throat, when the violence of the symptoms has been subdued, and a brisk cathartic given as soon as it can be swallowed: a very prompt and vigorous practice can alone offer any prospect of successful termination. The evident tendency to spasmodic exacerbation in this disease, renders it probable that opium may be advantageously given, when the proper evacuations have been premised. As a last resource, some have recommended tracheotomy; but, upon the whole, considering the disadvantageous circumstances under which the operation must be performed, it can scarcely be thought advisable."—p. 234.

Permanent hoarseness, Dr. Gregory attributes to a thickening of the membrane lining the thorax; but he thinks it symptomatic of some constitutional affection, perhaps, in general, of scrofula. We have seen it end in phthisis. It sometimes originates in a constitution worn down by syphilis and mercury.

Our author observes, that

"Pathologists have almost invariably agreed in stating that the croup is not contagious. Some cases, however, which have lately fallen under my care, incline me to believe that this opinion has been adopted without due consideration; and in a disease so violent and fatal as croup, it is highly important that this question should meet with attention.—I feel myself bound, in all cases, to act upon the principle, that croup, in its worst form, is capable of being communicated by *contagion*."—p. 241.

Passing over pneumonia, chronic bronchitis, and pericarditis, we stop at inflammation of the peritoneal coat of the intestines, or enteritis.

"The extreme fulness of the pulse," our author observes, "the coldness of the extremities, shrunk features, hiccup, and other marks of the failure of the powers of life, which occur in the last stage of enteritis, are often said to denote that gangrene has taken place; but in a great number of instances these symptoms occur, without the slightest trace of gangrene being discoverable on dissection. Sufficient cause of death is to be found in the *extent* and *violence* of inflammatory action. When gangrenous spots do appear, it is supposed by some pathologists, that the inflammation has spread to the muscular structure of the intestines."—p. 282.

As peritoneal inflammation may be confounded with colic and affections of the kidney, our author is at pains to form the diagnosis of the two latter.

"Colic," he says, "is distinguished from peritoneal inflammation by the absence of fever, by the pain occurring in paroxysms, with occasional intervals of complete ease, and by its being alleviated, rather than increased, on pressure. With respect to affections of the kidney, I have seen them attended with severe and constant pain of the whole abdomen, costiveness, nausea, and vomiting, but the pulse was slow in these cases, and pressure on the belly did not aggravate the pain."—p. 283.

The pathology of the mucous membrane of the alimentary canal, as Dr. Gregory very justly observes, is of great importance—and, unfortunately, much of it is still involved in great obscurity. The membrane itself appears to be peculiarly liable to inflammation during the first years of life; and, on this account, the diet of children should be regulated with great care; for, if they are indulged with too great a portion of

animal food, they are affected not only with acute, but a species of chronic inflammation, ending in complete emaciation, and constituting one of the forms of the atrophia of children, named tabes mesenterica, marasmus, and infantile remittent fever. But inflammation of this membrane also occurs in adults.

"It is attended with a diffused soreness over the whole abdomen, rather than with pain. This is sometimes increased on pressure, but never to the extent that prevails in peritoneal inflammation. There is no considerable tension in the belly. The pulse is quick, with thirst, *languor*, and considerable febrile oppression. The tongue is *red* and *smooth*, and eruptions take place about the lips. Vomiting is frequently noticed, with the loss of appetite, indigestion, and irregularity in the alvine evacuations. Diarrhœa is almost uniformly present, and the stools are slimy, and tinged with blood. An increased secretion of mucus from the intestines, constitutes, indeed, one of the principal features of the disease. It must be confessed, however, that in the appearance of the evacuations there is considerable diversity. In some instances, inflammation exists to a considerable extent, while the motions differ but slightly from those of common diarrhœa. Nothing, perhaps, more strikingly distinguishes this complaint, than that degree of morbid irritability of the whole intestinal canal, by which food of the lightest kind, or a little cold water taken into the stomach, stimulates the rectum to immediate contraction.—The chronic form of the affection is marked by pain of the abdomen, diarrhœa alternating with costiveness, increasing weakness and emaciation, hectic fever, and a tongue preternaturally red, or aphthous."—pp. 304-5.

Dr. Gregory has seen this affection occur from accidental exposure to cold and moisture, but it more commonly supervenes on other diseases. It would appear, indeed, that inflammation and ulceration of this structure readily take place, when the system has been either in a very high or long-protracted state of inflammatory excitement. In the early stage of the complaint, blood-letting from the arm is advisable; and laxatives, particularly castor oil, should be employed occasionally during its whole course. When the feverish symptoms subside, and diarrhœa lessens, tonics, and in particular myrrh, may be used with great advantage.

"When the disease has assumed a chronic form, and when we have extensive ulceration to contend with, the treatment is very precarious. Astringents and bitters, with laudanum, are often indispensable, with the view of checking the diarrhœa, but the astringent tinctures should carefully be avoided."—p. 308.

Of dysentery, our author says, what cannot be too often repeated:—

"The employment of purgatives constitutes the most important part of the treatment. This must be steadily persisted in, until *fæcal* evacuations have been produced, and that sensation of load in the bowels completely removed, which leads to the effort of straining. Then, and *not until then,* may the practitioner desist from the free use of his cathartics."—p. 302.

Purgative enemata are insufficient to overcome the disease.

In rheumatism, no danger is to be apprehended, except from *metastasis* to some internal organ, as the heart or lungs. Dr. Gregory once saw a distinct case of an affection of the *brain,* by metastasis of acute rheumatism, assuming the very remarkable character of *delirium tremens.* Acute rheumatism is, at all times, a tedious, and rarely a dangerous, disease. In the cure of rheumatism, our author seems to lean most to the antiphlogistic regimen.

"Bark," he says, "was introduced as a remedy in acute rheumatism, with the highest encomiums, by Dr. George Fordyce and Dr. Haygarth; but, as far as my observation extends, it has, in no instance, answered the expectations which might have been formed of it from the testimony of these authors."—p. 323.

In chronic rheumatism, where there is any considerable degree of effusion, either within the capsular ligament, or the bursæ, or where the cellular membrane in the neighbourhood of the joint is œdematous, Dr. Gregory thinks he has seen the vinum colchici of essential service. A few grains of magnesia seem to obviate the effect which this medicine sometimes has upon the bowels.

It is not above two hundred years since gout and rheumatism were accurately distinguished; yet it must be acknowledged, says Dr. Gregory, that a close affinity subsists between them; that they run into each other by insensible degrees; and that the term *rheumatic gout,* so frequently employed in common life, is, at the same time, strictly scientific. The general features of, and resemblance between, gout and rheumatism, may be traced to the identity of the structures which are attacked, the similarity of the termination of the two diseases, and their mutual tendency to affect some internal organ by metastasis. The stomach, intestines, heart, and brain, have, at different times, been observed to be the seat of retrocedent gout.—The symptoms, in many instances, warrant the suspicion of inflammation in such cases, but it is doubtful if this holds good when the stomach or brain is attacked.—It has never been determined, whether cases of hereditary or acquired gout are most numerous. Dr. Gregory rejects the idea of a morbific matter being the proximate cause of gout; but he

thinks that a pathological connection really subsists betwixt gout and gravel. No medicine, he observes, without a strict attention to diet and regimen, is capable of warding off an attack of gout; and this opinion, we believe, few persons will call in question. —Erysipelas, hemorrhage, and consumption, terminate our author's first volume, and they are treated of in the same plain, sensible manner as the preceding; but they contain nothing worthy of being extracted.

The second and largest volume of the two, is employed upon chronic diseases; the protean forms of which, says Dr. Gregory, not only perplex the practitioner, but oppose the most serious obstacles to their accurate description. Though not commonly, nor necessarily, accompanied by fever, yet feverish symptoms may arise in all of them, at any period of their course. Their pathology is obscure; but they will afford to the pathologist an endless subject of curious investigation—among the preliminary observations in chronic diseases of the encephalon, we find the following passages which we extract as a fair specimen of our author's answer:—

"There still remains to be stated," he says, "one principle of very general application in the pathology of nervous disorders. Hitherto we have had some cognizable cause for the symptoms—the effusion of blood, inflammation, or the pressure of a tumour. But it is to be remembered, that there exists an affection of the brain and nerves equally independent of pressure, and of all disturbance in the circulation within the encephalon. The best illustration of this principle is afforded by the phenomena of the narcotic poisons, where coma and convulsion are produced by means, which obviously act on the sentient extremities of the nerves, and which, we may fairly presume, deprive the nervous system of its *mobility*, or of its power of receiving or communicating impressions. Such a pathological principle is necessarily obscure, from the very nature of the functions concerned; but it will be found an indispensable one on many occasions, as, for instance, in any attempt at explaining the pathology of tetanus and hydrophobia, or in elucidating those varieties of epilepsy and chorea, which depend upon the sympathy of the brain, with some distant organ. The principle being once established, there remains no longer any difficulty in understanding why, in a great variety of cases of chronic disease of the brain, no morbid appearances of any kind are found upon dissection. This interesting fact, indeed, has been denied by some, and explained away by others; but it is too frequent and too obvious to be thus got rid of. The student in medicine may here receive an important lesson. He may learn from this, that the causes of *death* are often as obscure as the sources of life and health; and that morbid anatomy, with all its

acknowledged advantages, may, if pursued too exclusively, injure rather than forward the conclusions of the pathologist."

We would wish to notice the attempts which have been made to correct particular symptoms observed during life with certain appearances found after death;—in other words, to establish *minute diagnosis* among the morbid affections of the several structures contained in the encephalon. Pathologists, more especially those of recent times, have been at pains to distinguish inflammation of the arachnoid, from a similar affection of the other membranes;—extravasation into the ventricles, from extravasation with laceration of the substance of the brain; disease of the anterior, from disease of the posterior lobes of the brain;—injury of the brain, from injury of the medulla oblongata. It would be presumptuous to say, that attempts of this kind are altogether nugatory; but it cannot be denied, that hitherto very little success has attended them; that the rules laid down by authors are subject to such numerous exceptions, as to interfere greatly with their application in practice; and lastly, that no reasonable hope exists, of deriving from them, even if considerably improved, any portion of practical advantage. It is of more importance to trace the *analogies* among the chronic diseases of the encephalon than their minute shades of difference; and we shall be assisted in this, in the first place, by considering the similarity, and even in many cases, the identity of their predisposing and exciting causes. Mania, for instance, and epilepsy, are hereditary. The exciting causes of epilepsy, are, for the most part, those of apoplexy; and palsy, chorea, hysteria, and many varieties of epilepsy have a common origin in a disordered state of the stomach and bowels. But in no way is the connection among these diseases so strikingly displayed as in the circumstances of their mutual conversion, and in their manner of running into each other by insensible degrees. We have already alluded to this, in the case of hysteria and epilepsy; but it is equally well marked with regard to palsy and apoplexy; syncope and convulsion; convulsion and mania; mania and apoplexy. One individual of a family has had epilepsy, while others have been deranged. Epileptics commonly die with comatose symptoms; neuralgic affections are not uncommonly succeeded by amaurosis or by apoplexy. Instances of this important principle in pathology need not be multiplied, as they must be familiar to all who have enjoyed any share of general practice.

Apoplexy, at an advanced period of life, has been attributed to an ossified or otherwise diseased state of the arteries of the encephalon. This may be true in some instances, though the

opinion has, probably, been pushed too far. In most cases extravasation may be the result of a *morbid action* of vessels analogous to that which takes place in hæmoptysis.

Pathologists have tried to discover some one morbid condition of the brain, which is present in every case of apoplexy; and the conditions fixed upon by different writers have been effusion, pressure, and interrupted circulation; and each of them has been supported by ingenious arguments. Pressure, as Dr. Gregory informs us, is applicable to the greater number of cases, though it will by no means apply *in all.* In point of fact, therefore, the apoplectic state is the result of different morbid conditions of the system. He will not allow, during life, the distinction of apoplexy into *serous and sanguineous.* The symptoms and treatment of apoplexy are too well known to need discussion here; and the same thing may be said of palsy; the pathology of which, when in the form of hemiplegia, our author considers as nearly the same as that of apoplexy.

Though we find no novelty in Dr. Gregory's account of epilepsy, yet he has distinctly stated its phenomena, and its occasional varieties, but more we apprehend from the works of Cooke and Prichard, than from his own observation.

"A variety of arguments, he informs us, might be adduced to show, that there exists primary functional disturbance of the brain leading to the epileptic paroxysm. The hereditary pre-disposition to the disease, the absence of all appearances after death, excepting such as are common to the forms of chronic disease of the encephalon, and the recurrence of the fits at irregular periods, and particularly at night, are strong confirmations of their doctrine; but to these we may add the peculiar character of many of the immediate *exciting* causes of the fit: of this kind are violent mental emotion, irritation, and the operation of certain poisonous matters, both of the narcotic and morbid kind."—p. 67-8.

In a very large proportion of cases of idiopathic epilepsy, and even in those which are connected with disturbed function of the bowels and uterus there is a well-marked preternatural fulness in some part of the vascular system of the brain. Cases of epilepsy, which arise from chronic disorganization of the encephalon are few in number, when compared with those which are the consequence of its *morbid action;* so that a permanent cure, or at least an alleviation of symptoms, may be reasonably expected from judicious treatment in the majority of instances. Argentum nitratum, arsenic, and oxide of zinc, have been beneficial in many cases of epilepsy, though we know nothing of their mode of action; yet we are compelled to believe that those and similar drugs may be really entitled to that credit which a too scrupulous pathology has often denied to them.

From the chapters on mania, chorea, tetanus, and hydrophobia, we extract nothing. Between the two last, our author observes so many points of resemblance, that he includes them in one chapter. The next subject of his research is neuralgia, which finishes his first class of chronic diseases. This complaint has been known to last twenty years; and though it renders life a burden, it has commonly little influence in undermining it. Its causes are involved in deep obscurity. It seems rather to be on the increase in this country, though we cannot tell to what this is owing. Some pathologists conjecture that neuralgia depends principally upon some obscure affection of the brain; and Dr. Gregory, from having known the disease, in one instance, terminate fatally by coma, and in another to be followed by amaurosis, is inclined to look upon this as a correct opinion. We also have known two cases of a disease resembling *neuralgia facialis*, end fatally in coma. Opium is the only remedy capable of affording *effectual* relief to the unfortunate patient. Belladonna has been productive of occasional advantage.

"In the case of a young woman," says Dr. Gregory, "who came under my care some years ago, having many of the symptoms of neuralgia, decided benefit was obtained from the application of leeches, a blister, and the free employment of purgative medicines. The affection under which she laboured is not uncommon; and I particularly allude to it here, having reason to believe that it is sometimes mistaken for *genuine* idiopathic neuralgia. From this, however, it differs in the circumstance of its occurring at an early period of life. I have observed it only in young women, and I believe it to depend chiefly, if not entirely, upon a disordered condition either of the stomach or bowels."—p. 130-31.

Dividing the affected nerve, has seldom given much relief; nay, in some instances, it has aggravated the pain. Neither has excision of a portion of the nerve been attended with advantage. The second class of chronic diseases commences with bronchocele; and our author is disposed to think, that there is an important connection betwixt it, and some peculiarity in climate. This apparently is *humidity;* perhaps in company with morbid exhalations; but Dr. Gregory never expects to arrive at any certainty on this subject. Many cures of this disease have been reported, as arising from the internal use of burnt sponge; but perhaps many more might be found, where that medicine had imparted no relief whatever. The mode of its operation is not known. Iodine, of late years, has been supposed to be its active principle; but our author seems to have some doubts of this. Deobstruent remedies, in some instances, have been serviceable, as the liquor potassæ and

the carbonate of soda, in union with small doses of calomel, and such medicines as may gently open the bowels, without weakening the system. Rhubarb and the neutral salts have been recommended for that purpose. In certain cases, not of long standing, extractum conii has been useful. Bronchocele has also been cured by pressure.

"It is well ascertained," says Dr. Gregory, "that the constant use of a neckloth has sometimes checked the progress of the disease, when early resorted to; and to the want of such support, I have heard Italian physicians ascribe the greater frequency of the complaint among females."—p. 141.

The following sentence will show, that the author has very little faith in surgical remedies:—

"Upon the whole," he says, "we are led to conclude, that though the means of relief in the hands of the physician are far from possessing any general or very decided efficacy, they are nevertheless to be preferred to those severe, and more doubtful ones which surgery has hitherto afforded."—p. 143.

Passing over the chapters on asthma, hooping cough, and chronic affections of the heart, the materials of which have been borrowed from Bree, Watt, and Alan Burns, we come to that upon asphyxia, from which, as having some air of originality, we shall transcribe a few extracts. Under the head of asphyxia, are included all investigations connected with sudden death.

"Asphyxia cannot be considered a disease, but it is a state nearly allied to it, in which the sources of life and health are suddenly and violently invaded; the different kinds of sudden death being merely the simplest cases and best illustrations of those terminations of disease, which it is the object of the art of medicine to avert.—In many kinds of death, two distinct stages are perceptible. In the first, sensations thought, and voluntary motions are destroyed. In the second, circulation and the organic functions cease. In common language, the term *life* is annexed to the presence of mental phenomena, and death to their absence. In a strictly physical sense, however, the body is said to be alive, so long as actions are going on in it—differing from any which chemical and mechanical principles can explain. In considering, therefore, the order in which the functions cease, we do not stop when we come to the cessation of all indications of the mind, but we pursue the changes as long as any movements take place in the body, inexplicable by such laws. In other words, the body is not pathologically considered as *dead*, until *organic* as well as *animal* life has ceased."—pp. 190-91.

From the above passages, it will be evident to the reader,

that, even in the enunciation of the simplest truths, our author's language is not always free from obscurity.

"Death," he goes on to say, "by pure asphyxia, is attributable to venous blood acting as a poison; first, upon the nervous, and secondly, upon the muscular textures of the body.—It takes place not only in hanging and drowning, but by cutting the spinal cord in the upper part of the neck, whereby the muscles of respiration are paralysed, and by confining an animal in vacuo, or in a simple irrespirable gas.—The only difference betwixt death beginning at the brain, and that by suffocation, is, that the circulation of black blood through the arteries is, in the present instance, the effect, and in the other, the cause of the cessation of animal life.—Instances of *sudden* death, beginning at the brain, occur in the case of severe injuries to the head, epileptic fits ushering in the attack of small-pox, poisoning by opium, woorara, and the greater number of narcotic poisons.—In sudden death, beginning at the heart, the order in which the functions terminate is reversed. The pulsations of the heart are first stopped, and as the brain ceases to be excited by the stimulus of blood, sensation, and voluntary motion, and the mental phenomena, gradually fail, and, with them, respiration and the contractile power of moving parts. In this case, breathing is the latest act of life, and, therefore, here only can an animal, in strict pathological language, be said to *expire*.—The mere cutting off the supply of arterial blood is not so detrimental to the brain, nor so speedily, nor so certainly fatal, as the penetration of its substance by venous blood.—It is well known that animals exposed to a certain degree of cold, perish. There is some doubt, however, as to the precise mode by which it destroys life. Some imagine that it operates by *coma*, and others, that it enfeebles, and ultimately checks altogether, the contractile power of the heart.—There are cases of sudden death in which all the powers of vitality are at once destroyed, or, at least, in which the functions of animal and organic life are so equally impaired, that it is impossible to ascertain the order of their cessation. Such cases are far from being rare. The most familiar instance which can be given of them is, that of poisoning by *arsenic*. The same principle is exemplified where death takes place from lightning, and exposure to the vapours of sulphur."—pp. 190-96.

Death, beginning at the lungs, takes place in almost all diseases where the lungs are affected primarily, as in hydrothorax, vomica, consumption, &c.; and in many, where they are affected secondarily, such as fevers, small-pox, and measles. Death by coma may be witnessed in apoplexy, hydrocephalus, phrenitis, and fevers, complicated with local determination to the head. Death beginning at the heart, is often observed in those who labour under peritoneal inflammation, affecting a *large surface* of the membrane; in very extensive and violent

injuries inflicted upon any part of the body; in severe burns; in ileus; probably in tetanus and hydrophobia; and in confluent small-pox. In these cases, the heart seems to be affected *sympathetically*. After some cases of parturition, even where there has been but little hemorrhage, the blood is detained in the capillaries, and the heart ceases to contract from *exhaustion*. Death taking place contemporaneously from the brain and heart, is exemplified in gangrene, which, like lightning or arsenic, appears to overpower equally every part of the animal economy.

Dr. Gregory now finishes the chapter with some remarks on the treatment of genuine asphyxia. Instances are on record of persons being recovered who had been half an hour under water; but in a scientific investigation, says our author, no credit can be given to such statements. It is a reasonable supposition, that if respiration has ceased during five minutes, life is irrecoverably lost. During the state of asphyxia, the body is to be kept in a warm atmosphere, and artificial respiration employed. The latter operation appears to be well adapted to cases of apoplexy, which succeed asphyxia; and, probably, it might be of service where animation has been suspended by opium, woorara, and such narcotic poisons as operate first on the brain, and, through it, on respiration. When death *begins at the heart*, it is wholly inapplicable. In a great majority of cases of asphyxia, tobacco glysters and cold affusion will be positively injurious. Galvanism holds out a better prospect.—Such is the substance of what Dr. Gregory, with the assistance of Dr. Alison, Professor of the Theory of Medicine, at Edinburgh, has been able to produce upon asphyxia.

We now enter upon the third class of chronic diseases, as those of the chylopoietic viscera. Dyspepsia is the first of these diseases which attracts the notice of the author; but it cannot be expected that we should here follow him minutely. We shall, therefore, merely extract a few occasional remarks. The state of the stomach is very generally thought to be evidenced by the tongue; but the tongue is often perfectly clean when the stomach is incontestably disordered; yet a *furred and moist* tongue generally indicates that the *secretions* of the stomach are in a similarly disordered state. With a view to practice, Dr. Gregory has always felt the absolute necessity of paying attention to the *causes* of dyspepsia; and, on this account, he has been at some pains to distinguish them.

He divides dyspepsia into primary and secondary, and enumerates the varieties of each. We shall extract his account of that kind which is symptomatic of an affection of the spleen.

It would be contrary to all analogy, to suppose that this organ is not subject to some primary forms of disease, but very little appears to be known concerning these. Dr. Bree has described an affection of this kind, which he imagines to consist in a *congestive* state of the vessels of the spleen. It is probable that an acquaintance with the physiology of the spleen might enable us to separate, and refer to their true source, many other cases now classed under the general name of dyspepsia. The peculiar symptoms of *splenic* dyspepsia, so far as we have been able to trace them, are fulness and sense of weight in the region of the spleen, without corresponding flatulence; a sullen countenance, and occasional hemorrhages. It chiefly occurs in young women.

In all forms of dyspepsia, the prognosis is favourable. Dr. Gregory thinks there is no just ground for the notion entertained by Dr. Wilson Philip, that it lays the foundation for organic diseases in distant parts, particularly the lungs. With regard to the use of medicines in this disease, it should be remembered, that almost any drug will injure digestion in a *healthy* state; and on that account, we should be sparing of medicine when the stomach is weakened by disease. The means of cure pointed out by our author are judicious, but not new. To oxide of bismuth, and sulphate of zinc, when employed in stomach complaints, he gives the name of *nervines*. On spasm or organic disease of the stomach, he is very superficial.

From our author's chapter on jaundice, diarrhœa, cholera morbus, cholic, and ileus, we extract nothing. In the chapter on worms, he observes :—

"A short, dry, *sympathetic* cough, or pains in the thorax, with corresponding dyspnœa or affection of the pulse, are among the most unequivocal symptoms of worms which I have ever witnessed. In like manner, I have seen worms occasion every symptom of peritoneal inflammation, with the exception of buffy blood. The difficulty of making an accurate diagnosis between the symptomatic *nervous* affections, brought on by worms and genuine hydrocephalus, has long been acknowledged. In many cases, I presume it to be quite impossible."—p. 269.

The treatment of worm cases has usually been conducted on very empirical principles. The oil of turpentine is undoubtedly the most powerful of anthelmintics. The full dose (in which it may be given *safely* even to children), is six drachms, in milk, or mixed in water, either by means of mucilage or honey.

In the chapter on infantile fever and marasmus, we find the

following remarks; not new indeed, but not the less worthy of being repeated:—

"Whatever is given to the child that is not digested, may justly be considered as sowing the seeds of subsequent disease. If not quickly discharged from the body by diarrhœa or vomiting, it injures by slow, and often imperceptible, degrees the digestive organs; *depraves* the humours, weakens the general habit, developes the scrofulous taint, brings on in some cases worms, and in the end, remittent fever; diseased glands, and a fatal marasmus."—p. 279.

The treatment and symptoms of this disease are too well known to need description.

Dr. Gregory next considers the subject of abdominal hemorrhage. That from the stomach occurs along with costiveness, colic, and other marks of simple functional derangement of the *bowels*. The discharge is often of pure blood. It occurs to young females, and to elderly persons of both sexes. Constipated bowels appear to be the *leading* feature of the complaint. The fæces when brought away, are unnatural in colour, consistence, and smell. It may, however, proceed from disease (chiefly organic) of the liver; and then it is a very dangerous symptom. Purging is adopted in almost every form of the disease. The subject of piles is here treated by the author at some length.

Dr. Gregory now begins his fourth class of chronic diseases, or those of the urinary and uterine systems. On lithiasis, he has been mainly indebted to Dr. Prout, and his remarks on diseases of the kidneys are also in a great measure borrowed. With regard to amenorrhœa and chlorosis, he has given the sum of all our knowledge on these subjects. He does not impute to the menstrual flux a greater influence in disease than it really possesses; but he is inclined to think, that the influence of the uterine functions in the production of disease is unquestionable; though the subject is of pathological rather than of *practical* importance. He is of opinion that scrofula is generally associated with chlorosis.

"Painful menstruation," he informs us, "admits of some relief from a small blood-letting, the hip-bath, sitting over the steam of hot water, ten grains of Dover's powder, given at night, and other *relaxing* measures; but in very many cases it recurs with unconquerable obstinacy, and baffles for a time every effort of medical skill."—p. 333.

But on this subject, and that of menorrhagia and leucorrhœa, there is nothing new to him who is acquainted with the very excellent principles of midwifery of Mr. John Burns, of Glas-

gow. The other diseases of this class are hysteria and ovarian dropsy.

The fifth class finishes the work, and is occupied with chronic constitutional diseases. These are scrofula, rickets, scurvy, hæmorrhœa petechealis, diabetes, dropsy, and chronic cutaneous diseases, from which our limits will not allow to extract any thing. We may remark, however, that our author attributes almost as much to the agency of scrofula, as M. Poilroux, of whose work we lately gave an analysis.

We now finish our review of these Elements, which, we think, will not add much additional honour to the name of Gregory. The book displays little research, originality, or learning, being merely a compilation; though, in general, a careful one, from the latest and most approved works on the respective subjects of which it treats. The work, however, has a more philosophic air than preceding ones of the same kind; if we except the Study of Medicine of Dr. Mason Good, which is *omni comparatione majus*. The style, though diffuse, and at times obscure, is exceedingly unaffected; and we find in it few of those anglicised Greek and Latin words, which in Dr. Good's work are so frequent and so nauseating; indeed we believe that *choledoch* is the only one of the kind which occurs in the two volumes. Neither does he employ anglicised French words, which is so much the fashion in the present day. He has great merit, also, in never blending heterogeneous doctrines and practices; consequently, he is a safe guide. He has no rage for new remedies, and seems rather more inclined to ancient than modern theories. As towards the end of his second volume, his style and matter are both improving, we hope he has within him the germ of something more noble than the work which he has now given to the world.

ART. IV. *The Principles of Forensic Medicine, systematically arranged, and applied to British Practice.* By JOHN GORDON SMITH, M.D. Lecturer on Political Medicine. Second Edition, greatly enlarged. 8vo. pp. 610. London, 1824.

Since we attended Dr. Duncan, senior's, lectures on medical jurisprudence, nearly thirty years ago, many improvements have taken place in that department of medicine. Many of them are, no doubt, owing to the impressive manner in which that excellent man recommended the study of it to his pupils.

We still think we hear him speaking something to this purpose:—I beg your utmost attention, gentlemen, to this subject; for at some future period, you may fall to be examined by men of great legal acuteness, who will infallibly detect the slightest errors of your evidence.

Having already examined the first edition of this valuable work in our thirteenth number, and given a view of its plan and execution, and having reviewed, in other parts of our Journal, Orfila on poisons, and Paris and Fonblanque on medical jurisprudence, we shall not, we fear, be able, altogether, to do justice to its merits; for we must principally confine ourselves to such subjects as we have not yet entered upon. It will be our great object, however, to do justice both to Dr. Smith and our readers.

After some preliminary remarks on the history of forensic medicine, in this and other countries, in which the author gives his reasons for publishing on that subject, after so many others had written upon it, he makes the following observations:—

"That the speculation as to the want of something more was not unfounded, is proved by the success of the experiment, and still more by the subsequent publication of the large work of Dr. Paris and Mr. Fonblanque. These gentlemen have embraced the whole range of political medicine, although the title is confined to one of its branches: and there might be scope for inquiry, how far even the real distinction among these has been observed, and whether they have been sufficiently separated in the details, to give clear conceptions of their individual bearings. In this work, the law of the case is laid down with its medical bearings—a combination that may be of eminent importance and utility; but which I consider unnecessary in order to produce a book that may be useful; because the periodical relations of these matters have been published over and over again, and are to be found in sources well known to the *Juris consult,* but which it must be rarely in the way of a *medical practitioner* to refer to, or concern himself with. I give this opinion, not as a criticism on the valuable production that has suggested it, but as a reason why I have presumed to labour, single-handed, in the same department. For both, I conceive there is abundant room; and I am unfeignedly gratified that the service has obtained so important an acquisition, as well as to find that the learned *Medical* author has, in so many instances, where my opinions were not published without considerable diffidence, and even some apprehension, confirmed them by expressing similar views."—pp. 14, 15. Introd.

The above paragraph is drawn up with a great deal of ingenuity; for while it bestows praise, it reprehends with delicacy and address. One of its expressions, that a circumstance of

utility is unnecessary to produce what is useful, may be true, yet it sounds awkwardly.

After paying a just tribute to the authors of many detached essays on forensic medicine, Dr. Smith remarks, that this science

"Can never be taught sufficiently by books alone. Many of the facts must be presented to the observation. Toxicological chemistry, and the physiology of infanticide, do not consist in words only. To acquire a due knowledge of these, and of several other subjects, the eye and the head, nay, all the organs of sensation, must be employed. Students have not been compelled to attend to this, and practitioners have sometimes attempted it to little purpose—the consequence is well known; but the remedy is still withheld. Confusion and disgrace have overtaken many a professional WITNESS; and there is nothing which medical men dread so much as the *witness-box*. This they have, generally speaking, abundant reason to do, and more now than ever. The members of the bar know better how to ask them, in general, than they do to answer questions of this nature. But from the existing regulations, as to medical education, there is little reason to expect amendment. The object, with too many, is to study but for one examination, at which this is not the sole department they run no risk of being troubled about."—p. 17. Introd.

These are strong, but certainly very just, observations; and we have great satisfaction in bringing the passage before our readers, while we regret that the last sentence of it should be so inelegantly expressed, as to be almost unintelligible. The remainder of the introduction is taken up with remarks on the arrangements employed by different writers, and by the author himself.

We enter now into the body of the work, and passing over apparent death, the tests of the reality of death, the semblance of death in the living body, and sudden death from morbid causes, subjects which our author has treated with much ability, we come to his remarks on sudden death from external influences, unconnected with crime. Such as death by lightning, by exposure to noxious gas, and to cold and hunger; by the immoderate use of spirituous liquors, by the imprudent swallowing of cold water, &c. Dr. Smith makes some observations on each of these causes, and then lays down the duty of the practitioner, when called to the examination of a body found dead, apparently in consequence of such circumstances.

"The practice of resorting to professional testimony as to the state and appearance of the body," he says, "is so general, that we shall assume it to be a matter of notoriety. If there be any obscurity about the case, the testimony of the practitioner may

be the sole important one; and all the results that follow the inquest may depend on the manner, as well as the matter, of his evidence. It becomes him, therefore, to proceed with caution, prudence, and intelligence, otherwise he may bring down misfortune upon the innocent, hinder the administration of justice—or (what generally ensues, where inappropriate conduct is displayed) injure his own reputation, and, along with it, his fortune.

"When, therefore, we are called upon to aid the researches of authority, in a case where a person is found lying dead, and no one is forthcoming to give any information on the subject, the following is an outline of what we ought to do:—

"It is a rule, under such circumstances, which should universally be observed, that if the body cannot conveniently remain where found until an inquest can be assembled, an accurate examination should be made into every appearance connected with it on discovery. It will be of importance to the medical practitioner to know the spot of ground, the situation of the objects, and the posture of the body when found. He must carefully examine the whole surface of the corpse—not merely to discover wounds and bruises, but also to detect any improper tightness, pressure, or other impediment to free circulation. If there are wounds, they must be carefully traced, and the anatomical relation of the parts in which they are found, is to be taken into consideration: if there are bruises, or any marks of violence whatever, the parts beneath must be dissected. These things being premised, whether we have yet discovered any presumptive cause of death or not, we are to proceed to examine the cavities of the body. It is not very material, perhaps, with which we begin; but in such important cases, we should never be satisfied with the morbid appearances found in one only, however conclusive these may appear. The circumstance of having rested there, and the consequent necessity of admitting the possibility that, by further search, other phenomena indicating fatal disorder, might have been discovered, may mar the whole process, and subject us to censure. Such neglect has not unfrequently occasioned much perplexity.

"If, on opening the head, we find turgescence in the vessels; hemorrhage accompanying the knife; blood extravasated in the cavities or substance of the brain, or elsewhere within the cranium; adhesions between the membranes, great vascularity in them, unaccompanied by injuries, or malformations, tumours, mechanical pressure from morbid enlargements or indurations; the presumption will be, that the person has died of apoplexia sanguinea: and this presumption (in the absence of positive signs, or proof of the contrary) will amount to certainty, if the other appearances and circumstances of the case are consistent with the established history of this disease. Thus, we know that one of the more ordinary exciting causes of apoplexy is repletion: consequently, the presence of alimentary matter in the stomach, to

great extent, or in an undigested condition, will favour the conclusion; and as the stimulus of strong drink generally goes along with that of a hearty meal, the sensible qualities of this substance being perceived in the contents of the stomach, will strengthen the evidence; or the detection of a quantity of such liquor, even without food, or with but a trifling portion, will often warrant the same conclusion; for this stimulus is also a powerful exciting cause of the same disorder. The body being of the make favourable to determination of blood upwards, will likewise contribute to warrant the opinion."—pp. 47-49.

The author now goes on to enumerate the various situations in which a person may be seized with apoplexy, when alone, so as to give rise to suspicions of criminal agency; and he points out, with much ability, the means of elucidation that should be employed. He then adverts to other diseases which may be readily mistaken.

"When the cause of death," he says, "has been some violent derangement of the heart, or great vessels in immediate connection with it, the appearances will be very satisfactory. No mistake can possibly occur as to ruptures in those organs, excepting one that, perhaps, too often takes place; notwithstanding the plainness of the method to avoid it—I mean the examination of them. Of all others they are the most frequently passed over: but were they more frequently examined in cases of sudden death, it is not too much to expect, that satisfactory cause would more frequently be discovered; for there is reason to think that those fatalities are not so rare as they have been considered."—p. 51.

He next speaks of death occasioned by lightning, the *non-respirable gases*, and exposure to cold and hunger; or by a draught of cold water being taken into the stomach, when a person has been violently heated. In this last case, Dr. Smith thinks, that the activity of the nervous principle is instantly and fatally checked.

"The consequences being so immediate, or, perhaps, it may be said, the fatal action being so rapid, we can hardly expect decided marks in the dead body. Indeed, vitality is so suddenly extinguished, that the parts cannot be supposed to have time to alter their appearance; and we may therefore expect to find them in the state in which they were surprised.

"Here, I apprehend, we must be satisfied with negative evidence. This will consist in obtaining the history of the case—coming to a knowledge of the fact, that the deceased, in a state of health and high exertion, drank imprudently of cold water—and finding no marks about the body of any other cause of death."—p. 58.

In concluding this part of the work, the author reminds his reader—

"That in all the cases now alluded to, the subject of examination

is dead; and the cause of death either unknown, or that assigned impugned. He will, therefore, have to depend on his own professional knowledge, as to deciding on the real cause. He must proceed without attaching more importance to preconceived notions or statements than he will find reason to countenance from the appearances, generally positive, though it may happen even negative, in the body. Upon these he must *give* his opinion, and it follows closely that upon these only should he *form* it."—p. 60.

In the preliminary remarks on *Homicide*, we met with the following passage, which, as being connected with the duty of the medical practitioner, we extract:—

"But when an accusation of violent death, or of murder, is set up, it may depend much, or even altogether, on the medical practitioner to verify the grounds for such accusation. He may find that there is some other, some more evident or satisfactory cause of death than criminal agency, or he may be able to satisfy those concerned, that the deceased had not been killed in the way alleged. Supposing, however, that his duty leads him to decide that life has actually been destroyed by unfair methods, he may encounter some of the following questions, which are of too important a nature to be lightly considered. Indeed, the whole of what falls to be said in this class of medico-legal topics is but their explanation.

"He may be asked—are there no fatal diseases that have appearances similar to those found in the body on the present occasion? Could the person have inflicted this injury on himself? Has not a fatal result in this instance taken place from a cause that in another person would have been of little or no consequence? Was every thing done for the recovery of the deceased? or, might he not have recovered had proper treatment been pursued? And in certain cases, as hanging and drowning, it has been matter of enquiry whether the person was killed in the manner alleged, or first deprived of life, and then placed in that situation in order to baffle suspicion? All these, and other questions of equal importance, have been repeatedly put to professional witnesses."—p. 64.

We object to the title of the section, "Of death where there is question of personal agency;" as it has more the appearance of applying to suicide than homicide.

Our author, now entering on the subject of poisoning, has, we think, very unnecessarily refined a good deal about forming a definition of it; for, in the present day, we presume that the definition of such a plain term is not wanted. The following sentence is of much more importance:—

"On the part of the medical practitioner, it is necessary to be well acquainted with those substances of a poisonous nature, which we may meet with in the ordinary economy of life—whether for medical use, for application in the arts, in the fabrication of

utensils, on account of their natural beauty (as certain shrubs and plants that adorn our gardens), or as objects that may be mistaken for articles of food, or be applied in other ways to the living system, in consequence of their resemblance to bodies that are useful or innocent."

In the enumeration of poisons, Dr. Smith has arranged them under the heads of corrosive or escharotic, astringent, acrid, narcotic or stupifying, narcotico-acrid, and septic or putrifying; and he has considered the individual articles of each as they occur successively in the animal, vegetable, and mineral kingdoms of nature. On each of these we shall make a few short extracts.

"The general symptoms that ensue, when a person has swallowed corrosive poison, are violent pain, and sense of heat in the stomach and intestines, accompanied with constriction of the mouth and fauces; frequent vomitings, often of blood, followed by sanguineous diarrhœa, and occasionally attended with hiccup and tenesmus. The pulse is quick, small, and hard, becoming at length imperceptible. The body becomes very cold, and suffused with cold moisture; though these symptoms vary, there being sometimes intense heat, accompanied with inextinguishable thirst. Some poisons of this class produce priapism. There is generally great anxiety and oppression about the præcordia, and fœtor of the breath. In the meantime gangrene is rapidly advancing within; although the production of this state of parts may not be required to bring on the fatal result."—p. 70-1.

The patient commonly endures these symptoms for several hours.—Lead, and its preparations afford an example of the *astringent* class.—The *acrid or rubefacient* poisons are those which produce inflammation when applied to the intestinal canal; and they are almost all furnished from the vegetable kingdom. Perhaps all drastic purgatives, when given in an improper dose, belong to this class.—The *narcotic* poisons affect the system with torpor, denoted by sleep, or stupor. They do not seem to act upon the structure of the parts to which they are applied. Among these, we include opium, laurel, henbane, &c.—The *narcotico-acrid* produce, as their name implies, the united effects of the two former. Many of the symptoms produced by these poisons are also not unfrequently occasioned by disease; hence the propriety of a careful examination of the body after death, to ascertain, if possible, the presence of the poison. This class comprehends some of the most deadly poisons known to exist—the upas tree of Java, the ticunas of America, the deadly nightshade of our own country, the fox-glove, hemlock, &c. The last class of poisons, the septic, all belong to the animal

and gaseous kingdoms; and consequently, their application to the living system can scarcely ever be considered as a criminal affair.

Dr. Smith now goes on to state the duty of the medical practitioner, when called to a case of poisoning; but we shall merely observe, that chemical knowledge must be his grand qualification for clearing up the obscurities of poisoning by minerals—and especially by metals. One important fact must be treasured in his memory, that where these last are in question, they, viz. the uncombined metals themselves, should be the chief objects of his search.

The whole subject of poisons, our author has discussed with much talent; but we must restrict ourselves to that of arsenic, as a fair specimen of his manner, and as involving in it many points applicable to the rest.

"This substance, if administered internally, in very small quantity, quickly extinguishes life; and the following are the symptoms that commonly succeed its introduction into the system. An austere taste in the mouth and fauces, accompanied with fœtor in the breath, and frequently with ptyalism, or continual spitting; constriction of the pharynx and œsophagus; the teeth set on edge; hiccup and nausea, accompanied with vomiting, for the most part, of a brown coloured subtance, and not unfrequently of blood. With these are joined great anxiety, heat about the præcordia, and syncope; inflammation of the mouth, fauces, and œsophagus; painful irritability of the stomach, rendering it unable to retain the blandest liquid. The alvine discharge is black, intolerably fœtid, and sometimes mixed with blood. The state of the pulse is not always the same. In general it is frequent, small, and irregular, though sometimes slow and unequal. The heart palpitates, and syncope is not unfrequent; unquenchable thirst comes on; and the body becomes frequently hot, though sometimes an icy coldness takes place; and respiration is difficult. In the meantime the urine becomes scanty, red, and even bloody; an alteration takes place in the countenance; a livid circle forms round the eyes; the whole body swells, is affected with itching, and becomes covered with livid spots, or what may appear to be a miliary eruption. These formidable symptoms are aggravated by great loss of strength, and of feeling, particularly in the extremities, while delirium and convulsions, often accompanied by an intolerable priapism, falling off of the hair, and detachment of the epidermis, are followed up by death."—pp. 83-4.

This appears to be but a fuller enumeration of what has been already summarily stated to be the effect of a corrosive poison. But even in this short passage, *syncope* has been twice repeated. It is seldom, however, that all of these symptoms

occur in one case. On opening the bodies of persons killed by arsenic, we detect inflammation of the *primæ viæ*, with, occasionally, an intermixture of gangrenous spots, or sloughs, and even perforations.

In our inquiries into the presence of arsenic, we shall find difficulties thrown in our way by the colouring matter of many substances; but, with the aid of chlorine, much of this embarrassment may be got rid of. At any rate, the practitioner should frequently make experiments with the single solution, which will give him confidence, when more important examinations may be necessary. In the case of arsenic, there is, unfortunately, no *antidote* which we can *confidently* administer. The best method of proceeding is, to expel it from the body and dilute its causticity. Dr. Smith has been informed that the tincture of opium has been given with the happiest effects during the activity of the poison.

"A method of affording relief," he says, "in cases of poisoning, has been lately presented to the profession in this country, as the *invention* of a London practitioner, which may, in certain circumstances, perhaps, be applied to the case of arsenic. The principle is that of injecting the stomach with warm water, through an elastic tube, furnished at the external extremity with a syringe or gum bottle, capable of containing about a *quart!* the contents are then withdrawn, by pulling up the piston or relaxing the bottle. The operation is to be repeated till the water comes off clear and tasteless."—p. 92.

This is by no means a new thing. The French have been long acquainted with it, and the original idea has been ascribed to Boerhaave, though it has been neglected in practice.

In such cases the practitioner, if called alone, should, as soon as possible, have the co-operation of another professional man; and if this cannot be obtained, he should keep a strict eye on any solid or fluid matter, which he may intend to examine afterwards more at leisure; and if he is unaccustomed to the operations of chemistry, he should avail himself of the assistance of some adept; but every thing that is done must pass under his own eye. Our author now goes over the whole process of examining, with the greatest accuracy, the contents of the *primæ viæ;* and which, being nearly the same as that which Dr. Black used to detail to his pupils, more than thirty years ago, cannot be supposed to possess much novelty. Dr. Smith thinks that the evidence of every practitioner should be rejected as inconclusive, if he has not gone over all the steps of it.

Enumerating the various modes of detecting arsenic, he

observes, any *one test* is but corroborative of the rest, therefore a plurality should be employed, from the *concurrent results* only, of all which, will his opinion be warrantable and receivable as evidence: and that *the metallization*, where the quantity of poison is sufficient to enable him to go that length, *must never be omitted;* otherwise his conclusions will be subject to animadversion at least, if not rejection.

With regard to the other metals, our author has given the substance of all that is known concerning them as poisons.—We, however, must say no more on the subject; but, before leaving it, we may observe, that a charge of poisoning with *copperas*, or the sulphate of iron, has lately been entertained before a Court of Judicature in England. The evidence of professional men went to establish, that the stomach would not retain a sufficient quantity of it to prove directly poisonous.

On concentrated acids and alkaline substances, Dr. Smith is equally satisfactory; but we pass over these and come to vegetable poisons, which, till very lately, were looked upon as altogether inscrutable, after being swallowed; if we except a very few. In consequence of some late discoveries:—

"The active poisonous power of some plants," says Dr. Smith, "has been found to exist in a certain principle, known to, and recognizable by the analyzer, educible by a certain process, and capable of entering into certain combinations; by which the plant has risen into a degree of importance unknown before. Thus the active principle of opium is found to reside in an alkaline body, termed morphine, which may be obtained and combined with various acids. A corresponding discovery has been made respecting some other plants.—These should be matter of study on the part of the medical practitioner. In the meantime, whatever may be said as to difficulty, or want of experience, as regards *them*, he must indispensably be conversant with the external appearance and sensible qualities of every article of the materia medica, and, particularly, of the vegetables recognized by practical authorities as belonging to this department. Who would not blush at being unable, by the circumstance of smell alone, to distinguish between laudanum and tincture of digitalis, the extract of cinchona, and that of opium."—p. 154-5.

In short, the practitioner should be intimately acquainted with all known poisons, and particularly poisonous plants, and, in a more especial manner, of those of his own neighbourhood.

"If to this it be objected," says the author, "that such an acquaintance requires a share of attention incompatible with the claims of the other, and more ordinary calls on his professional exertions, and that people forget what they are not in the frequent

habit of seeing; the answer is easy. These things must be studied sometime or other; and if it be even conceded that they may afterwards he forgotten, who will not admit, that between sitting down *to refresh the memory,* and to learn *de novo,* there can be no comparison in point of enterprise."—p. 155.

We regret that our limits will not allow us to follow Dr. Smith in his admirable description of the vegetable poisons. We shall, however, extract a few remarks on the lauro-cerasus. Its medical and deleterious properties have been ascertained to depend on the hydrocyanic or prussic acid; the distilled water of the lauro-cerasus may amount, therefore, to little more than a dilute preparation of prussic acid. This acid is remarkable for its agreeable smell. In the form of laurel water, experiments have been made with it on animals in various ways. In all these it has produced the most violent convulsions, succeeded by stupor and death. Its action is exerted on the nervous system. Its produce has been sought for in the stomach, immediately after its ingestion; but to no purpose. In many cases, death has instantaneously followed its exhibition. Diffusible stimuli seem to afford the only hope of obviating its sedative effects.

We have next some curious remarks on animal poisons; under which head Dr. Smith has spoken of the generation of maggots in the human body, and even in such quantity as to occasion death. Of these being found in wounds, we often heard, when in Egypt, with the British army, in 1801; but from their never having been met with in our practice, where the patients were regularly dressed twice a day, we could not help suspecting that they were often the product of uncleanliness. Dr. Smith mentions a case which occurred in Ireland, where a man died of total putrisolution from maggots. We have read of a cow being made a skeleton of in one night by ants, in Congo. We are surprised that the author *has not said* any thing of the morbus pedicularis. But this subject is rather foreign to forensic medicine.

Dr. Smith next considers suffocation, under the heads of drowning, hanging, strangling, smothering; but of these we have often spoken in late Numbers. On the subject of wounds and bruises, however, which next follows, we must, in justice to the author, say something. Formerly, a person inflicting violence on another, was held amenable for consequences during a year and a day; a principle, which in many cases, would involve the innocent, and allow the guilty to escape. The law now looks to the *intention,* and where there has been a design to kill, or do some "grievous bodily harm," the

crime is the same, though the design may have failed. When a surgeon is called to give his evidence, after having examined the injury, it will be expected of him that he should describe the situation of the wound minutely, and with precision; if about the head—over what bone, or portion of a bone; if in or about the abdomen, in which of the nine regions into which it is technically divided; and if the examination has been made after death, through what organ, or place of importance it might have passed. It will be necessary, also, to state the degree of injury that each of these may have suffered, and how far that injury may have contributed to the fatal termination; but, at the same time, all deranged habits of the constitution and deviations from ordinary structure, must be carefully noted down. And if a long space of time has elapsed betwixt the infliction of the injury and the death of the person, an opinion must be given with great caution. In short, the evidence of the surgeon should show that he is intimately acquainted with physiology, and pathology. He must, also, state the length, breadth, depth, figure, and direction of a wound; whether it is incised, punctured, or lacerated, &c.; and with what kind of weapon it was apparently inflicted. The true appearance of every thing must be described; and the surgeon must be careful not to confound his own blundering dissections, with the real injury.

"I have in my possession," says the author, "the original report of a dissection, in which many extraordinary circumstances are detailed—among others, the presence of a urinous fluid in the cavity of the abdomen, and no bladder. It is evident, however, from the report itself, which adds that the catheter passed, *per urethram,* into a membranous bag, lying under the pubes; that this organ being in a state of more or less distention, had been touched with the scalpel, its contents evacuated, and itself retracted within the cavity of the pelvis. I have met with the report of a trial, where the question related to an injury of the head, and a practitioner swore that on examination, he found a large fissure in the cranium, which a better instructed member of the profession described to be the sagittal sature."—p. 268.

In all cases, it will be of much service to the practitioner to be well acquainted with recorded facts of a similar nature, and these his reading must supply. Where a dead body is found with wounds, or contusions, it will be necessary to inquire, whether they were inflicted during life, or whether they were the cause of death; and if so, whether they are to be charged to the account of suicide or homicide. When wounds have been inflicted during life, there will be marks of inflammation,

unless death has been *sudden*;—if wounds have been deep, and have injured large blood-vessels, there will not only be internal hemorrhage, but there will be marks of the loss of blood. There will be no such appearances if the person has been wounded after death.

We have next a distinction made betwixt *ecchymosis*, which occurs only in living bodies, and *sugillation*, which is never met with but in dead ones. *Sugillation* is an effusion of blood into the cellular membrane, not from violent rupture of the vessels, like *ecchymosis*, but from intrinsic causes, such as the commencement of the putrefactive process; and it is not infrequent in the living body. But in dead bodies, it must not be confounded with the ecchymosis, which had previously taken place in the living body. Sugillations principally occur in depending parts of the body, and where there has been pressure in the latter stages of disease.

Dr. Smith now treats of wounds, in order, as they occur in the head, neck, chest, and belly; and in pointing out the duties of the surgeon, he shews the embarrassment in which an ignorant one has been sometimes placed.—One of these gentlemen, upon an occasion of this kind, being much alarmed, wished to obtain some hints as to the mode of acquitting himself, which alas! could not be accomplished; for the only source of information he had any conception of, was a book written by one Farr, which book, in a remote place, was not to be had on the spur of the exigency. Consequently, a poor man was sent to the county jail, to await trial for his life, on a charge of wilful murder, which need not have been done, had the surgeon been a man of science. Gun-shot wounds are next treated of.

To suicide, this author gives the name of "death by spontaneous personal agency." This is surely an unnecessary circumlocution; for suicide is certainly as appropriate to the thing signified, as his newly-invented word *prolicide*. In a case of this nature, the surgeon may be called upon to do away or confirm an imputation or suspicion of crime, with regard to the living; and his great object will be to ascertain, whether the wounds were inflicted by the suicide himself, or by others. It will be proper, also, that he be perfectly cool, and no wise influenced by current report and prejudice. Much may be learned, not only from the situation, but the appearance of the wound. With regard to self-murder, we approve of Dr. Smith's proposal, that the body of every suicide should be given to some professor or lecturer, for the purpose of public dissection; yet such a step could not but be hurtful to the feelings of the deceased's relations.

We would now fain have entered on the subject of prolicide, including fœticide, and infanticide; but having been already pretty full upon it in former Numbers, we must content ourselves with a few extracts; premising however, that we think this part of the work the author's masterpiece.

In judiciary investigations, the medical practitioner, in general, is not to speak from the imagination of what might have been, but from the evidence of what is: and his conduct should be regulated by this principle. If, in cases of abortion, we make our examination at the very time of it, we may come to absolute certainty by finding the ovum; but if afterwards, we can form only a probable opinion. Dissection will enable us to decide more accurately. To ascertain whether it has been induced unavoidably, or by criminal agency, we must, in some respects, be guided by circumstances; but these it is not necessary to enumerate in this place.

By medicines which act violently on parts connected with the uterus, or which induce general disorder and debility, that organ may be excited to the discharge of its contents; and this has frequently happened, but, rarely indeed, without injuring the health of the parent, or even occasioning her death. There may, however, be an uncertainty with regard to the impregnation, and these medicines may be administered merely to favour the return of the catamenia; but it is difficult to establish this distinction, and it is improper that it should be admitted. An ignorant female, however, may have been induced unconsciously to lend her aid to the nefarious undertaking.

"The practitioner should be aware," says Dr. Smith, "that certain drugs or preparations have been more generally resorted to than others, with the view of procuring abortion; for it may happen that the identification of an article known to have been administered to a female during the pregnant state, is an important point of proof. It must be recollected that the statute declares the criminality to consist in *administering, &c., any medicine, drug, or other substance or thing whatever, with the intent thereby to cause or procure the miscarriage of a woman, &c.* Upon this, a person was charged to have administered to a woman a decoction of *savine*; and witnesses having been called on his behalf to prove that it was not *savine*, it was argued that this signified nothing; for if the substance administered to the woman (whether actually with child or not) was, in the prisoner's opinion, capable of procuring abortion, he was equally guilty. In this instance, however, the verdict was *not guilty*, as it appeared the woman had threatened to destroy herself, if she could not conceal her shame, and the prisoner had given her an innocent draught to amuse her. Still, however, it is proper to be aware of what drugs are vulgarly considered capable of effecting the purpose.

Here let me caution those who sell these things, to have an eye to *their own* safety, at least; for by dabbling with a loose sense of its importance in this matter, they may render themselves accomplices, even though vending articles perfectly innocent."—p. 323-4.

Women also, sometimes resort to blood-letting to procure abortion. A certain quantity of blood taken with the consent, and by the hands of a surgeon, may not appear to savour of criminality; but, after his departure, the woman may undo the bandage and encourage hemorrhage, even to syncope. We need not speak of abortion by means of instruments; as instances of this kind are not uncommon.

Speaking of infanticide, the author claims our respect by the manliness and humanity of his sentiments, by his desire to be inflexibly just, and by his sympathy for the unfortunate mother.

"In taking away the life of her child," he says, "she is driven to the commission of so unnatural a crime, that we ought, perhaps, to be ready to admit of mitigating circumstances in many instances. The law allows of none, where the crime has been committed. It is not here (as it may be in killing a grown up person) that there was provocation, urging to ungovernable fury, or that one's own life was threatened, and in danger, or that an accident occurred from fire arms, or other chance medley. The new-born infant cannot be connected with any such influence. But a new-born child may actually die a violent death, and such an account be offered in explanation, as our knowledge of the economy of human parturition must not only allow to be possible, but even to be true."—p. 333.

We have not room for our author's eloquent pleading in favour of the female who has concealed her pregnancy; but it is well worthy of being read.

We cannot here refrain from giving his summary of the proofs that a child has been born alive.

"The immediate effect of respiration," he says, "is to change the colour of the lungs to a florid red, and to expand them to the full capacity of the cavities in which they are placed, so that they will be found, when fully inflated, to cover the pericardium. They become of a light and spongy consistence, and if placed in water, are so buoyant as to float on the surface. On cutting into them, the escape of the air contained in their cells causes a peculiar crepitating noise, and a bloody fluid will exude. In the heart we shall also find marks of the altered circulation. The foramen ovale may not be closed, as that is an alteration requiring some time for completion; and the distinction, that there is an *approach* to union, may be too nice for practical observation: but, as the whole of the blood has now been past through the lungs, the canalis arteriosus will now be found empty. The same will be the case with the canalis venosus; and both these passages collapsing, soon degenerate into imperforate ligaments. The pulmonary vessels will be

enlarged. The diaphragm will have less convexity. The urinary bladder will probably be empty, and the intestines freed, more or less, from meconium. Much stress cannot be laid upon ecchymoses, because they may be produced by natural pressure during birth, even though the child should come dead into the world."—p. 343.

From the obscurity that has been studiously thrown on the subject, infanticide may be called the *opprobrium medicina forensis*. Many practitioners, neither ignorant nor idle, think that there is no certainty in the matter; and as things now stand, the bent of professional testimony is in favour of the accused. Dr. Smith, however, believes, that there is no good ground for the *unqualified* accusations which have been brought against the *tests* of life or death; and on that account he has entered fully and ably into the subject; to which we must refer our reader.

"The hydrostatic test," he says, "and all other circumstances connected with the lungs, relating to the question of life in the new-born infant, though forming the most important links in the chain of evidence, are but links—for the conclusion must be drawn from the concurrence of many facts."

But we are not to denounce the *docimasia* as absurd in itself, because in a few rare cases we have been unable to come to any conclusion.

Though on a subject so well known, our extracts may have been too numerous, we cannot avoid making one more, on circumstances favourable to the accused.

"As we find the great majority of those against whom the charge of infanticide is brought, have borne good characters; as to the previous state of their feelings, the very circumstance of carrying a child successfully through the term of pregnancy to the time of parturition, ought to bear a favourable construction. If it can be proved, that for nine months, or the greater part of that time, the accused has been careful of herself, and has not been known to take, or be in the habit of taking drugs, it is a negative ground of presumption, that she meant no evil to her offspring."

But this last remark rather concerns law than physic.

With regard to surgical operations, the profession should be aware that patients may have a verdict against their medical attendants for neglect or mal-practice. On mutilations, military punishments, stuprum, and insanity, we need say nothing; but we shall, by way of cautioning practitioners, extract our author's note on examining and approving of recruits.

"The recruit may have enlisted in some distant part of the country, and been examined, approved, and sworn, at the time: but on reaching the place where he is to be formed into a soldier, he must be examined anew, by the commanding officer and surgeon. Should

he then be disapproved of, on the ground of physical disqualifications, enquiry will of course be made, whether the disability existed at the time of his enlistment, or was contracted afterwards. If the former be the fact, censure would be due to the person who made a careless inspection, and probably an action might be the consequence, in the case of a civil practitioner, to recover the bounty, subsistence, and other expences, incurred on account of the recruit."—p. 440.

The remaining subjects of the volume may be regarded more as objects of curiosity, than useful, if we except pregnancy. In speaking of hereditary peculiarities, Dr. Smith observes, that some striking feature of a distant ancestor may re-appear in his remote descendant, although it has not been seen in the intermediate generations; and we believe there is a proof of this in the resemblance which subsists betwixt his present Majesty and his great, great, great grandfather the Elector of Hanover, who married the grand-daughter of James the first.

The volume concludes with some remarks on medical evidence. Till lately, the greater part of the medical profession barely knew of the existence of forensic medicine; and practitioners often make but a poor appearance in a court of justice; partly from want of self-possession, and partly from having a bias, intentionally or otherwise, towards one side of the question. We should advance our judgments in the most precise and simple manner, but should not enter upon any arguments or apologies for our opinions. The practitioner is examined *viva voce*, either as to his knowledge of a particular event, or his opinion is required on a fact that may be submitted to him; so that it is the *prudentia medicinæ*, rather than the *prudentia juris*, that he ought to cultivate. It is highly necessary that he study every branch of forensic medicine, as he may depend on being examined as to the attention he has paid to it. He should bear in mind, that all witnesses must speak from what they themselves know—and from that only. Before going into court, he should compare notes with such other professional men as may be concerned in the matter; for a neglect of this has sometimes produced awkward circumstances. When called before a tribunal, it is his duty to put the judges of the cause in full possession of every particular which relates to the physical question, as far as he himself is conscious of them; for he is sworn to speak, in his answers, not only the truth, but the WHOLE truth.

We have thus finished our review of this valuable work, in which we have been able to detect very few inaccuracies. Some repetitions we have indeed observed, but they are few in number, and in general have proceeded from the author's anxiety to

impress strongly on the mind some important subject. He writes, for the most part, in a good English style, though it is occasionally diffuse and inelegant. In one instance, and in the short space of four lines, he uses the word "frequently," no less than three times. Is "construable," p. 2. an English word? What is the meaning of "evitation of fluid," p. 90? We hope that "ptialism," which occurs several times instead of ptyalism, is an error of the press, as we should be sorry to think our author ignorant of its etymology. We think it a pity also, that would-be witticisms should ever deform a work on so grave a subject; such as, surgeons being accused of the *resurrection* of bodies, p. 29; and bleeding themselves to death *secundum artem.*

Our author has compiled liberally from Fodoré and Orfila, and some others whom he mentions; but we wish he had always referred to the page and column of the works he made use of; for such references, though they may appear pedantic, are infinitely agreeable to literary readers. But we must now close this article with observing, that we still think Dr. Smith's work the most valuable manual on forensic medicine that has appeared in English.—Dr. Beck's Medical Jurisprudence in our next Number.

ART. V. M. LOBSTEIN *on the Sympathetic Nerve and its Ganglia. De Nervi Sympathetici Humani Fabrica, Usu, et Morbis, Commentatio Anatomica-Physiologico-Pathologica Tabulis Aeneis et Lithographicis illustrata.* Auctore Joh. Frid. Lobstein. 4to pp. 174. Parisiis, 1823.

It is altogether unnecessary to expatiate on the variety of opinions which have been promulgated, not only on the functions, but even on the form and composition of the sympathetic nerves: suffice it to say, their number and differences are such as to shew that we are still far from having arrived at any thing positive and uncontroverted. Under such circumstances, it is satisfactory to observe an anatomist of M. Lobstein's reputation, adding his exertions to those made by others, with the object of illustrating a difficult and obscure subject.

As the treatise now before us is one of those which, from its form, its expense, and its publication in a foreign country, can rarely fall in the way of a large proportion of our profession, we conceive that we shall perform an acceptable office in giving such an account of its contents as shall leave as little as possible to be desired.

The treatise is divided into three principal parts, the anatomical, the physiological, and the pathological. The anatomical section includes a general description of the nerve; some particular points of its history; describes its evolution in the fœtus, and its intimate structure. It would task our reader's time and patience more than is necessary, were we to detail the description of the nerve given by M. Lobstein, so far as it accords with that given by systematic anatomical writers. Those who may feel inclined to refresh their memories, we may refer to the works of Weber, Soemmering, Cloquet, and others of less note.

Origin and Termination of the Sympathetic.—A question has often been started, as to the origin of the sympathetic and its termination.

"A vain discussion," says M. Lobstein, "which may be avoided by describing it as a nervous cord, extended longitudinally in the axis of the body, and having two extremities, the one cephalic, the other pelvic."—Præf. p. 10.

Another question of the same kind relates to the branches it receives and gives off:—

"To obviate this," says M. Lobstein, "I have divided the branches of the sympathetic into external and internal: the external, most remote from the axis of the body, connect the sympathetic with the spinal nerves; the internal proceed to the various organs, and are constantly found to accompany the vessels."—Præf. p. 11.

Certain delicate branches of nerves found in the carotic canal, upon and about the carotid artery, and connected with the cerebral nerves, were formerly considered as the commencement of the sympathetic. Before Meckel traced the vidian nerve, and detected the deep branch which passes from it into the carotic canal, the origin of the nerve was stated to be from the abductor or sixth cerebral nerve. After his discovery, the origin was described as taking place both from the fifth and sixth cerebral nerves. In later times, the idea of origin has been abandoned, and this connection is considered simply as the mode in which certain branches, issuing from the superior cervical ganglion, pass into the head—p. 2. On this point, M. Lobstein states that he has observed three branches proceeding backwards from the abductor nerve, and forming an obtuse angle with its continued trunk; they rest upon the carotid artery about its third flexure, and constitute a red, gangliform plexus, which is joined by the filament from the vidian nerve. From this ganglion, besides two fasciculi of soft filaments to the coats of the artery, there pass two principal branches, one behind, or on the inner side of the carotid, the other along its upper and back part,

which, when they arrive at the lowest part of the carotic canal, unite into a slender cord, which receives the name of sympathetic nerve. Some varieties are occasionally met with: in one subject, an oval ganglion, three lines long, and one thick, was placed in the middle of the carotic canal, at the distance of eighteen lines from the superior cervical ganglion, with which it was connected by a slender cord. From this cavernous ganglion proceeded five branches, of which three surrounded the carotid artery, whilst the other two formed an anastomosis with the abductor and vidian nerves. The branch to the abductor subdivided into two filaments before its connection with that nerve.—p. 3. By attentive examination, M. Lobstein has found that the sixth pair of cerebral nerves is formed of two principal filaments, an upper and a lower; of which the latter receives the branch from the sympathetic.

In modern times the cephalic extremity of the sympathetic has formed a favourite subject of inquiry. Bock, in his splendid work *, has described the sympathetic, after its ascent from the superior cervical ganglion into the carotic canal, as dividing into two branches, which, through the medium of the plexiform ganglion, anastomose with the deep branch of the vidian nerve; with the abductor nerve; and with the motor oculi.—Ribes † has made a similar statement, with the addition that he has sometimes found a ganglion on the anterior communicant artery of the brain. According to that anatomist, two filaments proceed from the ganglion contained in the carotic canal, first detected by Laumonier ‡, and described as the cavernous ganglion, to the third pair of cerebral nerves, with which they are connected: he also states, that some branches proceed from it to the trunk of the superior and inferior maxillary nerves. M. Lobstein, on the other hand, states that he has never been able to discover any of these filaments, though he has clearly distinguished the ganglion, and had drawings made of it.

Ribes moreover states, that, after washing the brain and its vessels, he has found a fasciculus arising from the nerves covering the carotid, which accompanies the ophthalmic artery and all its branches, and enters the ball of the eye with the central artery of the retina. He also says, that the ophthalmic ganglion receives a filament from the sympathetic, and that thus the sympathy is produced which exists between the retina and the nerves of the iris.—pp. 32-33.

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* Beschreibung des fünften Nerven paars und seiner Verbindungen mit andern Nerven. Meissen. 1817.

† Mem. de la Soc. Med. d'Emulation. Vol. 8, part 2.

‡ Journal de Medecine, &c. par Bacher. Tom 93.

H. Cloquet, in his excellent work *, confiding in these observations, has admitted the extension of the sympathetic into the orbit and ball of the eye, and the existence of a communication between the retina and superior cervical ganglion. In the same manner he admits an anastomosis between this ganglion and the ophthalmic, or nasal nerve of Willis.

It must not, however, be supposed that the discovery of the branches of the sympathetic, in the carotic canal, is of recent date. Winslow †, many years ago, recognized and described its carotic plexus. The branches composing it were likewise observed, and described by Girardi and Fontana.

M. Lobstein's dissections, often repeated during a long period of time, do not confirm the abundance of filaments described by the authors above quoted: he has, indeed, frequently detected pellucid filaments, of a gelatinous texture, connecting the branches of the sympathetic with the motor occuli, and other nerves; but when examined with the microscope, he found that they had no pretension to be considered as branches of nerves. He objects to washing or maceration, with the view of rendering the nervous filaments more evident; for, by this process, the common cellular structure is reduced to white filaments, which may be easily mistaken for the continuations of nerves.—pp. 34-35, &c.

Anastomoses of the Sympathetic.—Another point of interest consists in the anastomosis lately described by Professor Jacobson ‡, of Copenhagen, as existing in the cavity of the tympanum, between the fifth pair, the glosso-pharyngeal nerve, and the sympathetic. According to that author, the superficial, or petrous branch of the vidian nerve of the fifth pair, at its entrance into the Fallopian fissure, or foramen innominatum of the temporal bone, consists of three divisions, lying in contact with each other; an upper portion, which, according to the common description, unites with the facial nerve; a middle and a lower portion, which are each included in distinct canals, penetrate the cavity of the tympanum, and form the anastomosis above mentioned. Of these two, namely, the middle and lower divisions, the first descends along a groove formed on the surface of the promontory, and, in its course, receives the second or lower division, which had proceeded so far in its particular canal. Below this last of the three divisions of the vidian nerve, and within the tympanum, appears another filament, originating from the carotic branch of the

* Traité d'Anatomie descriptive.

† Exposition Anatomique Traité des Nerfs.

‡ Acta regiæ Societatis Hafniensis Medicæ. Vol. 5. Hafniæ, 1818. p. 292.

sympathetic nerve, passing through the fibrous tunic which lines the carotic canal, together with the osseous plate separating it from the tympanum, and running horizontally to the trunk formed by the anastomosis already described. The trunk, thus formed, descends, accompanied by an arterial branch and covered by the membrane lining the tympanum. It sends off some branches, the upper ones to the membrane of the foramen ovale, and one lower to the membrana tympani. It then descends to a little pit in the bone, where it enters the ganglion of the glosso-pharyngeal nerve. This fossula has been described by Anderseh*, who called it "receptaculum ganglioli petrosi nervi glosso-pharyngei." Anderseh also states, that it leads to a narrow canal continued into the internal ear, and containing a little nerve.

Such is the account given by Professor Jacobson, with these additions, that the anastomosis is constant, that it does not present any anomaly, and that it exists in all animals. Other enquiries render this discovery problematical, though M. Cloquet has admitted it without quoting the discoverer, and with this difference, that he asserts that the branch of the sympathetic enters the tympanum through a little foramen in the aqueduct of Fallopius.—On the other hand, M. H. F. Kilian, in an excellent work on the ninth pair of nerves†, states, as the result of dissections made for the purpose, that though a twig from the glosso-pharyngeal nerve does sometimes enter the tympanum, it is more frequently lost in the petrous part of the temporal bone, and never unites with the superficial branch of the vidian nerve; that the Fallopian fissure or foramen innominatum is always single, and never divided into three canals for receiving three divisions of the vidian nerve, as represented by Jacobson; and that no filaments from the sympathetic enter the tympanum, though some pass to the substance of the bone.—pp. 36-37.

M. Lobstein has himself found that a twig, arising either from the upper cervical ganglion, or from the sympathetic before the formation of the ganglion, enters a particular foramen situated in the first flexure of the carotic canal, and leading to a canal in the substance of the bone. The filament of the sympathetic, contained in this canal, suddenly divides into two diverging portions, of which the first, anterior to, and more slender than the other, penetrates into the cavity of the

* Fragment. Descript. Nervor. Cardiac. in Ludwig. Scriptores Neurolog. Minores. Vol. 2.

† Anatomische Untersuchungüber das neunte Hirnnerven paar. Pesth. 4to. 1822.

tympanum, runs over the promontory, and unites there with a twig detached from the petrous part of the vidian nerve; the second, somewhat larger, runs in an osseous canal to the posterior part of the tympanum, and also unites with a twig from the petrous part of the vidian nerve; by this union is formed a branch, which passes through a foramen close to the fossula of the glosso-pharyngeal nerve, and inosculates with that nerve.

"To make this description more intelligible," says M. Lobstein, "it is to be noted that all these branches run in osseous canals, hollowed out of the anterior, superior, posterior, and inferior parietes of the tympanum, except the branch of the sympathetic, running in a groove upon the promontory. Hence, if we begin at the canal receiving the branch of the superficial part of the vidian nerve, we shall find that it enters the tympanum by one opening above the promontory; that then, proceeding backwards in a curved direction, it runs through the substance of the promontory near the fenestra rotunda, and subdivides into two little channels, of which the first terminates by a minute foramen in the carotic canal, and the second near the receptacle of the glosso-pharyngeal nerve, in the basis of the cranium."

Besides the confirmation given to the discovery of Jacobson, by M. Lobstein himself, he informs us in an Appendix, that M. Ehrmann, Chief Anatomist in the University of Strasburgh, has also found that the ganglion of the glosso-pharyngeal nerve gives off a tolerably large branch, which enters a canal in the os petrosum by a foramen on its lower surface; this branch, on arriving at the promontory, divides into three portions, of which the first runs downwards towards the fenestra rotunda; the second ascends, and unites with the superficial, or petrous part of the vidian nerve; whilst the third runs forwards, passes out of the tympanum through the osseous septum into the carotic canal, and anastomoses with the nervous plexus surrounding the carotid artery.—In one subject, the ganglion of the glosso-pharyngeal nerve received a communicating branch from the superior cervical ganglion of the sympathetic. p. 168.

On the whole, we think that there is reason to believe in the existence of the anastomosis described by Professor Jacobson, although there is some little variation from the manner in which he supposed it to take place.

Interruptions of the Sympathetic.—Is the sympathetic nerve uniformly a continued trunk from the head to the pelvis, or are there occasional interruptions in its course? This question, interesting from anatomical considerations, is particularly so in

a physiological point of view.—Haller* states that he once found the nerve interrupted at the sixth rib, the upper portion being continued from that point into the splanchnic nerve. This observation, which he confirmed, Bichât availed himself of in forming the hypothesis, that the ganglia of the sympathetic were distinct nervous centres. But Wrisberg† pronounced the observation of Haller to be an aberration from the natural structure; and by Weber‡, its existence is considered as very doubtful.

M. Lobstein coincides with these authors, and remarks that the trunk of the nerve occasionally appears to cease at the tenth intercostal space: but a more attentive examination will shew, that in such a case, the lowest root of the splanchnic nerve, partially concealed in the body of the eleventh vertebra, is the true continuation of the trunk; that it unites with a considerable branch from the spinal nerve lying between the eleventh and twelfth ribs, and afterwards takes its course into the abdomen.—pp. 38-39.

Among the more uncommon varieties of the sympathetic, is the superior splanchnic nerve found by Wrisberg, in eight subjects, arising from the cardiac plexus by three or four filaments, and entering the thorax with the œsophagus. It ran on the upper part of the bodies of the vertebræ, giving branches to the œsophagus, and either finished in the thorax, or entering the abdomen with the the aorta, was lost in the solar plexus. This nerve, which no one but Wrisberg and Ludwig has found, was not reckoned as constant by the former, he having often sought it without success. M. Lobstein supposes that its occasional absence may, perhaps, explain why the heart does not sympathize with the abdominal viscera equally in all individuals.—p. 40.

M. Lobstein consideres that Wrisberg has unnecessarily increased the number of plexuses; he has described pancreatic, duodenal, omental, cystic, umbilical plexuses, which either do not exist, or are merely a few filaments to the vessels of those parts.—p. 40.

M. Lobstein agrees with Walter,§ that neither the pleura, pericardium, peritonæum, nor lymphatics, receive any ganglionic nerves: the lymphatic glands are occasionally perforated by some twigs which are distributed on other parts.—p. 41. Some branches of ganglionic nerves are however given to other parts besides the vascular system; many, for instance, to volun-

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* Elementa Physiologia. Tom. 4 † Commentaria Goetting. 1779, vol. 2.
‡ Anatomia Comp. Nervi Sympath. Leips. 1817.
§ Tabulæ Nervorum. Thor. et Abdom.

tary muscles, as the longus colli, intercostals, and diaphragm: some to the ligaments of the vertebræ, and even to the bones.

Relations of the Nerves to the Vessels.—The lymphatics and the veins, except the branches of the vena porta, of the pulmonary veins near the heart, and the jugular, do not receive any nerves*. The nerves are connected in three ways with the arterial system.

1. The branches of nerves surround the larger arteries without adhering to them; thus the vertebral artery at its origin is embraced by numerous branches from the cardiac plexus, placed so thick and close together that they form a kind of membrane. Wrisberg† has improperly considered this structure in the light of a plexus. In the same manner the facial arteries are enveloped by nerves, which, however, do not enter their coats.

2. In by much the greater number of cases, the branches of nerves not only embrace the artery as ivy does a tree, but enter the organ with the branches of the vessel, become soft and pulpy, and vanish in the cellular coat, or are lost to the naked eye. Lucæ‡ has observed, and M. Lobstein confirms the observation, that in this respect there is no difference between the larger and smaller arteries.—p. 42.

"When these nerves," says he, "are examined with the microscope, they present a beautiful spectacle: the nervous filaments divide into numerous branches, closely applied to each other, and forming almost the whole of the cellular coat surrounding the artery. This structure I have frequently observed in the continuations of the nervi molles distributed upon the branches of the external carotid. The cellular texture covering the lingual and external maxillary arteries, when seen through a microscope magnifying sixty times, was a complete net-work of nerves, of a milky colour, and wholly different from the common cellular texture in the neighbourhood." "In a seven months fœtus," continues he, "I examined the nervus mollis running from the upper cervical ganglion to the external carotid, by means of a lens, and found it divide into seven white fasciculi, which were lost in innumerable filaments. Hence I consider it is beyond a doubt that a *nervous* cellular tissue exists, devoted to the arteries and nerves upon them, distinct from the common cellular tissue, particularly in displaying longitudinal fibrillæ of inconceivable subtility."—p. 42.-43.

3. "Ostensum nondum est," says Behrends *, "nervorum

* Murray in Ludwig. T. 2. p. 247.

† Commentaria de Nerv. Artereas Venasque comitant. Sylloge Comment. Anat. Goetting. 1786. 4to.

‡ Observations Anatomicæ quædam circa Nerv. Art. adeunt. et comitant Francof. ad Mœnum. 1810.

surculos carnes arteriarum accessisse." The contrary has since been satisfactorily proved. M. Lobstein found two nerves arising from the superficial cardiac plexus on the right side, perforating the external coat of the arch of the aorta before the origin of the arteria innominata, and lost in the middle coat: in a fœtus he found a branch distributed to the fibrous coat of the aorta near the origin of the left subclavian. Walter has observed the same thing, and Lucæ has described and given drawings of filaments of nerves distributed on the middle coat of the tracheal artery.—pp. 44-5.

External and Internal Branches.—The distinction between the external and internal branches of the sympathetic is evident and striking. The former never surround the vessels, and are sometimes found without any corresponding arteries, as the cervical and dorsal branches anastomose with the spinal nerves: they never divide into branches before their anastomoses. The internals, on the contrary, send off branches to the various organs, and uniformly accompany, surround, and adhere to the parietes of the arteries. Hence some, as Soemmering and Behrends, have called the sympathetic the vascular nerve. The external branches have all the same colour, consistence, and general appearance: the internal, on the other hand, vary in different situations; in the carotic canal they are delicate, red, and flattened, rather than cylindric; in the upper part of the neck they are thick, red, soft, and pellucid; in the lower part they are slender and white. In the chest they have the same general nature, but in the abdomen there is infinite variety in their texture and appearance: the stomachic plexus differs from the hepatic, the branches of the former being white, shining, firm, and conical, while those of the latter are red, soft, and cylindrical. The splenic plexus is more like the stomachic, and both of them embrace the arteries without being very closely connected with them. The branches of the superior mesenteric, on the contrary, adhere so firmly to the artery and its divisions, that they can only be separated by force. This adhesion is less perfect in the inferior mesenteric plexus: and M. Lobstein states as a general rule, that the nervous branches are closely united to the trunk, and the principal divisions of the arteries which they accompany, adhering more closely to the inner ramifications, and running parallel with them. The renal plexus agrees with the hepatic in this, that its branches are soft, thick, red, and beset with ganglia, which are never found in the stomachic or splenic.—pp. 45-6.

Ganglia.—The ganglia themselves differ considerably: a

* Dissertatis Inaug. qua demonstratur cor nervis carere.

principal one exists in each region; in the neck, the superior cervical; in the chest, the first thoracic; in the abdomen, the semilunar. The superior cervical is longer, softer, and redder than the rest. The semilunar ganglion is the most dense, and presents infinite varieties of shape.—p. 47. From his researches on the sympathetic nerve in the fœtus, M. Lobstein concludes that it exists in a distinct form; that it is thick, because of the proximity of the ganglia; that the ganglia are perfect, have their usual colour, and appear longer than in the adult, except the semilunar ganglion, which increases more slowly than the other parts of the ganglionic system.—p. 52.

In considering the structure of the sympathetic, M. Lobstein has given his reasons for considering it as a single nerve, stretching from the head to the pelvis. In an experience of twenty-four years he has never known it interrupted: by attentive examination, and the aid of maceration, he traced its fibres through the ganglia, in one instance from the first cervical to the fifth thoracic ganglion; in another, from the first thoracic to the second sacral ganglion. Like the cerebral and spinal nerves the sympathetic is composed of fibrillæ interwoven with each other in a plexiform manner. Such also is the case with the branches, although, according to Bichât, this structure exists only in the branches of communication with the cerebral and spinal nerves. Scarpa* has stated the contrary, and M. Lobstein has fully proved it by giving representations of the splanchnic nerve and a branch of the hepatic plexus reduced to a plexiform state, by a separation of the fibres of which they are composed.—pp. 58-9. Tab. 3. and 5.—The branches of the mesenteric plexus alone form an exception, for even when examined through the microscope they present the appearance of simple cords without fibrillæ.

Structure of the Ganglia.—The ganglia possess two coverings, the one formed of a loose cellular tissue, the other of the same structure, but much more firm and dense. Under the coverings of the ganglion is found a soft, moist, ash-coloured substance, filling the spaces between the nervous fibres, and forming a tuberculated mass. By maceration this substance becomes flocculent, but never degenerates into cellular substance. According to Scarpa, the nerves entering the ganglia are so divided, and again unite in such a manner, that each nerve issuing out is composed of fibres from every nerve that enters. Wutzer, who has made the ganglia a subject of particular investigation †, distinguishes them into three kinds, ce-

* Annotationes Academicæ.

† De corporus humani. Gangl. &c. Berol. 1817. 4to.

rebral, spinal, and those of the vegetative system. The latter are composed of two substances, the one medullary and white; the other pulpy, cellular, and of a cinereous red colour. The first has the same external and chemical characters as the medullary substance of other nerves. The second consists of a cellular structure containing innumerable minute vesicles, and surrounding the medullary substance in the ganglion.

M. Lobstein himself examined the composition of the ganglia, by macerating them in pure water in the manner recommended by Ruysch and Scarpa. He found in all the ganglia the gelatinous substance described by the latter. He afterwards, however, states that its occurrence is not constant, and that it cannot be considered as of the same nature with the cortical cerebral substance. He agrees with Wutzer in the opinion that the ganglia contain two substances, the one fibrous and arranged in a plexiform manner; the other flocculent and of a greyish colour. The superior cervical ganglion alone forms an exception, for even when examined by the microscope, after a month's maceration, it appeared homogeneous, being composed of innumerable, delicate, cotton-like threads, not collected into fasciculi. As a general fact it may be stated, that the larger the ganglia the less do they contain of the grey substance, and *vice versa*. This substance is also met with in the spinal ganglia.—pp. 65-6-7.

The ganglionic parenchyma has nothing in common with the substance of the brain; the latter is semi-fluid, is hardened by acids and alcohol, without being changed into a coriaceous substance; the former, on the contrary, is affected by those agents as the solid textures of the body, and acquires great density from their operation.—p. 67. By coction the ganglia are first hardened, and then become soft again. They are slowly acted on and dissolved by alkalies. They resist putrefaction longer than the cerebral nerves, and degenerate into adipocire.

The Plexuses.—The plexuses were considered by Scarpa to agree in function and office with the ganglia. This idea is to a certain degree confirmed by the examination of the spinal ganglia: those in the neck and upper part of the back are tubercles, whilst, as they proceed downwards, they become more open and distinct in their composition, so that the lumbar ganglia are in fact true plexuses.—p. 70.

"It is not to be doubted, however," says M. Lobstein, "that there are real differences. In the first place the mixture of fibres is much closer in the ganglia; secondly, they contain a semi-fluid secretion; and thirdly, there is the tomentous cinereous substance which does not exist in the plexuses."—p. 70.

It has been doubted whether there be true anastomosis, or only juxta-position of fibres in the plexuses. M. Lobstein decides for the former, principally from the analogy of particular nerves. In the loop of communication between the right vagus nerve and the solar plexus, he traced the filaments of the former without interruption into the latter, and *vice versa*, in such a manner that it was impossible to say where one began or the other ended.—p. 71. He has also observed the same fact in the smallest branches of the plexuses. Although the idea scarcely deserves a serious refutation, it is right to mention that M. Lobstein, (if we may judge from his silence), has not met with the branches of nerves of the sympathetic system which some individuals have persuaded themselves that they had discovered in the extremities.

Physiology of the Sympathetic.—It is evident that the less that is really known on any subject the more extensive is the field for hypothesis and difference of opinion. This remark is well exemplified by the physiology of the sympathetic system of nerves, which has often afforded scope for the exertion of fancy and supposition. It would be useless to recapitulate the opinions of Willis, Lancisi, Vieussens, Meckel, and others, ad infinitum, equally different from each other, and remote from truth. The hypothesis in which the ganglia are considered as little brains, or distinct centres of nervous influence, originated with Winslow and Johnstone, but received its most perfect developement from Bichât, and it must be allowed the merit of ingenuity, though the anatomical facts which form its groundwork are more than questionable. Scarpa assigned a use to them wholly mechanical, that of separating, mixing, and again uniting the nerves entering them. This explanation applies with reason and probability to the plexuses, but is manifestly inapplicable in the case of the ganglia. Reil* considers the ganglionic system as devoted to the organs of nutrition; as being connected with, but not originating from the cerebral system; as not possessing any common centre; as the medium of the influence of the mind on the organs of vegetative life; and as preventing the impressions on the internal organs from being constantly conveyed to the sensorium.

It would be tedious to follow M. Lobstein through the disquisitions which lead him to the following conclusions:—1. That the sympathetic nerve presides over the functions of nutrition and secretion; 2. That it regulates the action of the heart and the circulation of the blood; 3. That it forms a

* Archiv. für die Physiologie; B. 7.

medium of connection between the principal organs; 4. That through it, mental affections, &c. are conveyed to those organs; and 5. That it presides generally over the organs of nutrition and all their actions.—pp. 100-4-5-6-7.

These opinions coincide very nearly with those generally entertained, although they appear to us extremely doubtful.—How can it be supposed that nutrition, secretion, and the circulation of fluids should, in animals, stand in the relation of effects to the nerves, whether ganglionic or cerebro-spinal, when we observe them to be effected, in other instances, without the intervention of the supposed cause? Where can we find nutrition more perfect, secretion more exquisite or more varied, or circulation (that is, motion of fluids by vital action) more vigorous than in vegetables, in which even those who have hypotheses to support, hesitate to suppose the existence of any thing comparable to a nervous system? Linnæus, indeed, made the pith of vegetables a subject of comparison with it, but the opinion never had any foundation in truth, and has long been rejected.—In short, although the nervous system exercises a powerful influence over the organs of vegetative life, every argument drawn from observation and analogy, tends to prove that it has no claim to be considered as the cause of the functions which they perform.

Animal Magnetism.—On the subject of animal magnetism, we cannot resist the temptation of quoting a remark of M. Lobstein's, from its close agreement with what we have said on a similar occasion.—(*Quart. Jour. For. Med.* Vol. 4, p. 7.)

"Non rejiciendas esse censeo observationes, quæ virium naturæ humanæ occultarum declarare videntur existentiam; atque dedecet, meo arbitrio, medicum philosophum aspernari phænomena absque prævia indagine et propter unicam rationem, quod obscuritate sint tecta, et non quadrent cum receptis principiis ac vulgaribus notionibus."—p. 114.

In speaking of the functions of the ganglionic system of nerves, M. Lobstein has not taken any notice of the influence which they have been supposed to exert on the production of animal heat.—(*Vide Quart. Jour. For. Med.* Vol. 3, p. 499, *&c.)* The omission is singular, and we are unable even to guess the cause.

Pathology of the Sympathetic.—If we had some doubts as to the correctness of the physiology of the sympathetic system of nerves, usually admitted, we are still more sceptical as to the supposed proofs of its influence in producing the phenomena of disease. We do not deny its powers in this respect, but merely that any distinct and well-known train of

symptoms can be referred to the affections of the sympathetic and its ganglia, except upon the most hypothetical and imaginary grounds. We are sorry to differ on this point from M. Lobstein, who, with a very excusable eagerness, has laboured to exalt the importance of that nerve in the production of disease. To various dynamic affections of it he ascribes the occurrence of hypochondriasis, hysteria, mania, colica pictonum, convulsive cough, angina pectoris, incubus, latent gout, intermittent fever, &c.—A moderate acquaintance with the general principles of pathology would authorize us to reject such an explanation, as applied to the greater number of the diseases in question, unsupported as the opinion is, by the evidence of fact and of dissection. The true seat and nature of hypochondriasis and hysteria are too well known, to render it necessary to refer for their explanation to the morbid actions of a system, of which our knowledge is too inconsiderable. The case is different with some of the other diseases: colica pictonum, in particular, presents some very singular, and not easily to be explained, phenomena, and we would suggest to those who may be favoured with convenient opportunities, that it might, perhaps, well repay their trouble to examine in those who die from this disease, the state of the spinal cord, its nerves, and the ganglionic system.

It would have been better had M. Lobstein confined himself to the changes of structure taking place in the sympathetic, though, even in this case, it is by no means easy to succeed in connecting the symptoms, during life, with the appearances after death.

Inflammation of the Ganglia.—As an instance of inflammation of the semilunar ganglia, he gives the following case:—A female, who from the time of puberty had suffered from hypochondriacal symptoms, and had been twice attacked by incomplete apoplexy, leaving partial paralysis in the right side of the face, was married in her 42d year. In fifteen months she became pregnant, and from the second week suffered from obstinate vomiting, even more than thirty times a day, which resisted all remedies. From the frequent vomiting the fauces became inflamed and gangrenous, emitting a fœtid odour. Her fingers, from being sometimes applied to the mouth, were even eroded. But the most urgent symptom was a burning pain near the spinal column, and in the lower part of the right hypochondrium, only to be relieved by dry friction, first with the hand, and then with a brush, to such an extent as at last to abrade the cuticle. She died in a state of marasmus.

Dissection.—Forty-eight hours after death, M. Lobstein ex-

amined the body. The cranium appeared smaller than natural, although there had been no deficiency of intellect. No disease could be detected in the brain, although she had long suffered from obstinate headache and delirium. The organs of the chest, the stomach, intestines, and urinary organs, were free from disease. The uterus presented some fibrous tumours in its substance. M. Lobstein removed the semilunar ganglia, and examined them attentively; they were not changed in texture, but were of an intensely red colour, which, by himself and other able anatomists, was considered as the result of inflammation.—This colour was so deep as to be scarcely diminished at the end of three days maceration. M. Lobstein has given a coloured engraving of the parts.—pp. 146-7-8. tab. 7.

Case 2d.—In a child of six years, who died of convulsive cough, he found all the left side of the solar plexus inflamed, the right remaining unchanged. After some days maceration, although the inflammatory redness had disappeared, a yellow appearance remained, proving the existence of organic change.—p. 150. tab. 8.

M. Autenrieth, of Tubingen, in a similar case, found the vagus nerve inflamed in its whole course through the thorax. The neurilema was painted with blood-vessels, and the pulp had a dull red tinge. The cardiac and sympathetic nerves in the thorax were also somewhat affected. The same author states that he found the nerves of the abdomen changed in structure, in a man who died of typhus; which, however, M. Lobstein has not been able to confirm.

Dr. Aronssohn, of Strasburg, communicated the following cases to the author:—A man, aged 47, entered the hospital for the purpose of having a tumour removed from the back, which had reappeared after a former operation. He was seized with shivering, trismus, and opisthotonos, of which he died in two days. On dissection were found:—1. A vascular net-work on the surface of the spinal cord with serous effusion. 2. An evident inflammation of the semilunar ganglia.

Case 2d.—A woman, aged 36, suffered from vomiting during the whole of her second pregnancy, subsequently relieved by the appearance of herpes on the breast and arms. This was followed by swelling of the left knee, diarrhœa, vomiting, hectic fever, and death. Dissection shewed inflammation and thickening of the mucous membrane of the stomach near the pylorus, and inflammation of the semilunar ganglia.—p. 152.

Our limits do not permit us to transcribe other cases of the same general description related by the author. One remark is applicable to all of them; that they presented nothing in their

symptoms which could lead to a discrimination of the seat of the disease, confirming the remarks we have already made on the obvious fallacies arising (in the present state of our knowledge at least) from any attempt to introduce this system of nerves into reasonings on points of pathology, or in leading to any practical principle of the least importance. For this reason, we think farther detail useless.

The plates, partly from copper, and partly stone, are ten in number, representing :—1. The sympathetic and its branches in the carotic canal. 2. The trunk of the nerve, from the first cervical to the fourth thoracic ganglion, shewing the continuation of the fibres through the ganglia. 3. The semilunar ganglion of one side to display its texture. 4. The vessels of ganglia. 5. and 6. Nerves of the sympathetic system separated into distinct fibres, to shew the plexiform arrangement possessed by them, in common with the cerebral nerves. 7. 8. 9. 10. Various instances of changes of structure in the par vagum, and in the nerves and ganglia of the sympathetic system.

ART. VI. *On the Nature and Treatment of the Distortions to which the Spine and the Bones of the Chest are subject. With an Inquiry into the Merits of the several Modes of Practice which have hitherto been followed in the Treatment of Distortions. Illustrated by Plates, in Folio.*—By JOHN SHAW, Surgeon and Lecturer on Anatomy, 8vo., p. 293. London, 1823.

Distortions of the spine are of so frequent occurrence, have of late occupied so much of the attention of the public, while so many different plans of treatment have been recommended for their cure, and yet their treatment is attended with so much inconvenience and uncertainty, that every fresh publication on the subject must, we feel convinced, be an object of interest. It cannot, therefore, be at all necessary for us to offer any apology for calling the attention of our readers to the publication, the title of which is placed at the head of this article. The subject is one to which we have ourselves paid considerable attention, and which we have had extensive opportunities of practically investigating in all its bearings. We shall, therefore, not merely give an analysis of the particular opinions of the author before us, but shall also state what appears to us to be

the most correct view of the pathology and treatment of the disease.

In our character of reviewers, we feel that it is our duty to speak impartially and without reserve, and so most certainly it is our intention to do; and therefore, we trust that our author will not be displeased with us, because we may not appear to judge as favourably of his performance as his own *partiality* led him to expect. Of the spirit in which we censure, he will have the best opportunity of judging; for we shall never censure without stating the reasons wherefore. And if, on further consideration, he is not convinced of his error by our reasoning, it will be a consolation to him, still to believe that he is right; and if, on the other hand, he is convinced, he will have the consolation of knowing that he is wiser than he was.—This notice we give distinctly, particularly in reference to the book before us, as we shall have to point out many things in it, which will require the author's revision, upon very important points of pathology and treatment.

Mr. Shaw's work contains some judicious observations; but it is principally made up of critical observations on the opinions which are entertained by others, and of tedious, and we think, for the most part useless, descriptions of diagrams. If it had been written in a less censorious and dictatorial style, we think it would have been more creditable to him, as an author, and we certainly should have been better pleased. Without farther preface, we shall proceed to analyze it.

Mr. Shaw, in his preface, states that the subject which he treats is an important one; that there is not a single book of authority on it; and that, therefore, he has been induced to publish his work. He further states, that he has not busied himself with vain theories; that his conclusions are drawn from facts, which cannot receive a colouring from preconceived notions; and that these are so numerous, that they may be considered sufficient to determine most of the questions connected with the inquiry. These facts, our readers should be informed, are principally derived from Mr. Bell's Museum, which, it can hardly be necessary for us to observe, is for the most part, and particularly in the department connected with the skeleton, made up of preparations procured from bodies brought into the dissecting rooms. Such preparations, obviously answer well the purpose of shewing what degree of deformity existed at the time of death, and what was the condition of the bones at that time; but in a pathological view, they are comparatively of little use;

for as far as regards most of the preparations, neither the ages of the patients from whose bodies they were taken, the duration of the distortion, nor the correspondent symptoms, are at all known. The specimens themselves are good of their kind, and well selected; but we cannot discover that they pourtray a single fact, with which we were not before acquainted. Similar specimens are to be seen in most of the extensive collections of morbid preparations in this and other countries. We consider the cultivation of morbid anatomy as one of the safest and most certain modes of improving medical science; but at the same time, we consider morbid specimens, without the histories of the cases in which they occurred, as little better than mere curiosities. Viewing the question in this light, we cannot perceive that in his detail of facts, Mr. Shaw has any thing to boast of, nor that his evidence is so complete as he seems to think; but we shall lay it before our readers, and then they will have an opportunity of judging for themselves. Before, however, we close our observations on the preface, we must beg leave to remind our author, that though evidence be good, it may not be sufficient; and that though the data be sufficient, the conclusions may be incorrect.

Mr. Shaw commences the work itself with what he designates Physiological and Pathological Observations on the Causes of Distortion. Our author, in this chapter, labours hard to prove the well-known and long established fact, that muscles may become so much weakened, by want of exercise, as to be incapable of performing their functions. When this takes place in the muscles of the spine—the vertebræ, he says, and the ligaments which bind them together, yield to the superincumbent weight, for they are affected in a secondary manner by the same causes that have produced debility in the muscles.

"Weakness of the muscles is," he goes on to say, "therefore, perhaps, one of the most frequent forerunners of distortion; though there are many other causes which I shall have occasion to point out, in describing the various causes of deformity."

He next adverts to the importance attached by the ancients to exercise, in developing the form:—

"But," says he, "such testimony is now unnecessary, as we have daily opportunities of observing, not only the good effects of well-regulated exercise, but also the actual deformity which arises from the disproportionate developement that is produced by the undue exertion of particular classes of muscles."

He adduces many opposite instances illustrative of the latter point; but it is a fact so well established, and therefore with

which our readers must be so familiar, that it cannot be necessary for us to detail them. He afterwards tells us, that the most probable source of many distortions is either in "*the cessation of the actions of some particular part, or in the undue or partial exercise of others.*" Our author concludes this chapter with some judicious observations on the treatment employed by quacks, in cases of distortion. He explains, that, by calling into action some "dormant natural power," they are sometimes successful in the treatment of such cases, when the well-educated surgeon has failed. But he adds, that, as they are not capable of distinguishing between different cases, and do not understand the principle on which their occasional success depends, they are liable to commit the most serious mistakes; and, "I do not hesitate to say, that such men are dangerous practitioners."

The next chapter is entitled, an Enquiry into the Causes of the partial Paralysis and Wasting of one of the Limbs during Infancy, which frequently produce distortion of the spine. This subject is very interesting, and well merits attention; but we cannot consider that it deserves to be ranked among the causes "which *frequently* produce distortion of the spine."

If we make a general survey, we shall, undoubtedly, often meet with instances of partial paralysis, and wasting of one of the limbs during infancy; but, at the same time, the instances of distortion of the spine, with which we should meet, would be so exceedingly more numerous, that we feel certain the former would not be found to exist in the proportion of one in a hundred to the latter. We think, therefore, that we are justified in stating, that an affection which comparatively occurs so seldom, cannot justly be considered as a frequent cause of an affection which really occurs so very frequently. Moreover, we may state, that the paralytic affection, which we are considering, does not necessarily produce distortion of the spine, and that when it does, the distortion is oftener so slight, as unavoidably to lead us to the conclusion that something more is requisite to occasion the lateral curvature of the spine, which is especially the subject of Mr. Shaw's observations. We have at present under our inspection two patients affected with the paralysis in question, who neither of them, when lying down, show the slightest distortion of the spine. Had these patients had a predisposing state of constitution, there can be no doubt that their spines would have become much distorted, and that then they might have been adduced as proofs of the correctness of our author's opinion. The ages of the patients are nine and fifteen. In both of them the paralysis occurred during the

process of teething. It is well known to our professional brethren that Mr. Abernethy has long ascribed such paralysis, as that under consideration, to disorder in the chylopoietic viscera, and that he principally relies on constitutional treatment for its cure. We know, moreover, from personal observation, that as soon as all constitutional and intestinal irritation is removed, he also recommends friction to be employed, and the affected limb to be cautiously exercised; but, when at rest, properly supported, and placed in an easy posture. Mr. Shaw, we are happy to perceive, adopts the same opinion of the cause of the complaint, and he judiciously recommends a similar plan of treatment. He very properly insists upon the necessity of paying particular attention to the organs of digestion.

"Respecting the best means of remedying the disturbed state of the bowels," he states, "there are a variety of opinions, which I shall not discuss; but rest contented with stating my conviction, that many cases of paralysis, which occur in children, proceed from disordered digestion, produced by the crude and insoluble matter with which the stomach is loaded, at an age when it is capable of digesting only the simplest food."

He further observes—

"It will probably not be denied that, be the original cause of the local defect what it may, it is absolutely necessary to attend to the state of the digestive functions."

But we must guard against the error of considering attention to the bowels all that is necessary. A strict regulation of the diet, and the moderate use of purgatives, will tend much to the restoration of the patient's general health; but such means alone are of little service in many cases of local affection. To restore a part to its pristine state of vigour, we must also attend to the principle laid down in the preceding pages. *The active exercise of an organ is necessary, not only to its perfection, but even to its "preservation."*

"In pursuance of this principle, whatever may have been the original cause of the wasting and paralysis of the limb, I would recommend that we should, in addition to such plans of treatment as the state of the constitution may call for, endeavour, by friction, shampooing, warm and cold bathing, &c., to excite a certain degree of action. This is to be assisted by mechanical contrivances, to bring the paralytic muscles into play, and also to support them in certain positions while they are at rest."

The next chapter leads us at once to the more immediate subject of Mr. Shaw's enquiry—"the Distortion, commonly called Lateral Curvature of the Spine." In this chapter there is no novelty whatever: it merely contains a description of the

appearance of a patient with lateral curvature of the spine. We, therefore, proceed at once to the consideration of the immediate causes of the lateral curvature of the spine.

This part of the subject is of the greatest importance, and, therefore, demands our utmost attention. The opinions of pathologists on the cause of the common lateral curvature of the spine differ exceedingly. Some attribute it to a morbid condition of the spine itself—namely, of the bones and ligaments; and others, to disease of the ligaments only: on the other hand, some maintain that the bones and ligaments are not at all in fault, and attribute the distortion entirely to a diseased condition of the muscles. There are others again, who deny that there is any disease whatever, and who maintain that the distortion is wholly produced by mechanical causes. Among these causes are to be enumerated irregular muscular action, or the habit of constantly exercising the muscles of one side of the body more than the other, and the habitual contortion of the body, while sitting and standing. Our author examines all these opinions separately, and unhesitatingly decides upon the merits of each.

"The idea at present generally acted upon is," says our author, "that distortion depends either on a diseased action of the muscles of the spine, or on their undue or irregular action. The latter opinion (originally German) has, of late, prevailed in London; but it is not difficult to prove, that although irregular muscular action may produce a degree of distortion, that it alone cannot be the cause of the common lateral curvature of the spine."

Our author's arguments may be very briefly stated. The spine is supported in its natural position by two great masses of muscles, which pass from the pelvis to the head. These have been divided, in an arbitrary manner, by anatomists, into many distinct muscles; but they are admitted to have nearly the same action, that of supporting and giving motion to the spinal column. The part of the spine between the origins and insertions of these muscles is, in the common lateral distortion, almost invariably carried in two opposite directions. If the distortion depended upon the too forcible action of the muscles of one side of the spine over those of the other, the curve would always be in the form of a single arch; ergo, the double curve, or common lateral curvature, cannot be produced by irregular action of the muscles.

Mr. Shaw states, that on the examination of the muscles in the dead body, he has found those on the *convex* side of the curve to be the largest. He also states, that the nerves of a distorted spine which pass to the muscles on the *concave* side

are *diminished to one-half their natural size.* Such a condition of the muscles and nerves is undoubtedly sometimes found in cases in which the deformity is very great, and has existed for a very long time, but never, we believe, at an earlier period of the deformity; nor when it is in a state that we can reasonably expect a cure; and it is evidently the *consequence*, and not the cause of the distortion. We cannot, therefore, admit that the preceding facts throw any light whatever upon the cause of the deformity.

Our author doubts whether lateral distortion is ever produced by disease of the muscles. He admits, however, that some distortions may be the consequence of chronic rheumatism, and also of the disease which produces wry-neck.

The next subject of examination is the opinion, that distortion is produced by disease of the ligaments, or by dislocation of the vertebræ.

Mr. Shaw denies that the ligaments are ever primarily affected in lateral curvature of the spine; and he states that on examination, he has always found that the intervertebral substances have retained all their characteristic qualities, and that all the other ligaments have been in a healthy condition. He admits, however, that the ligaments of the spine may become diseased—for he observes,

"When the ligaments are diseased, distortion of the spine is produced, but of a very different character from that which forms the subject of the present enquiry."

Our readers must be aware, that an empirical mode of practice has been lately founded on the absurd supposition, that lateral distortion depends on dislocation of the individual vertebræ. Our author very justly observes, that

"The fallacy of the opinion, that lateral distortions of the spine depend on dislocations of the vertebræ, must be obvious to every one who examines a distorted spine."

And we may add, that a candidate for a diploma from the College of Surgeons, who advocated such an opinion, would undoubtedly be rejected; but a PHYSICIAN who *acts* on it, is permitted by the College of Physicians to practice in the metropolis. Mr. Shaw very severely criticises the opinions and practice of this Physician, and clearly proves that the most serious injury may result from such empirical practice. He also adverts to the evidence which has been adduced in support of those opinions, and clearly proves that it is made up of misstatements and misrepresentations. In referring to the cases on which the evidence is founded, he observes that the most charitable inference we can draw is, that the medical attendant,

being ignorant of anatomy and pathology, mistook the nature of the cases, and was deceived himself.

"It is," says our author, "very necessary to examine how far the opinion is correct, that lateral curvature of the spine depends upon disease of the vertebræ, as it is very generally entertained by the best informed in our profession. The circumstance of its being supported by the most eminent Surgeons, would alone be sufficient to excite enquiry; but the interest in the investigation is increased, on discovering that this idea of the origin of the disease, which at first view appears to be safe to proceed upon in practice, is not only often the cause of a patient being subject to unnecessarily severe treatment, but also of an increase of the distortion."

Mr. Shaw does not deny that the bodies of the vertebræ are subject to disease, nor that distortion of the spine may be consequent on their diseases; but he maintains that, in such cases, "the distortion will be very different from that generally denominated lateral curvature; being either consequent upon caries of the vertebræ, or upon *rickets*, an affection which there is every reason to believe, especially attacks the osseous system."

Our author states, that—

"In the reports which, from time to time, have been made on the condition of the vertebræ of persons who have died with lateral curvature of the spine, it is generally stated that the bodies are softened, and full of a scrofulous substance; but on investigation this will be found to be incorrect; for in the greater number of instances, the internal structure of the bodies of the vertebræ has a natural appearance. It is easy to account for this mistake. If the vertebræ of a patient, who has long been confined to bed, be examined, the appearance described above, is found; but if a person has been in the habit of taking exercise, a short time previous to death, the bodies of the vertebræ are found to be as firm and compact, as those of a perfect spine."

The last quotation will, we consider, appear extraordinary, even to those of our readers who are least acquainted with morbid anatomy. Mr. Shaw, it is seen, distinctly states, that the peculiar condition of the bones, which is ascribed by the best and most experienced pathologists, to scrofulous disease, is wholly produced by confinement to bed: ergo, we are unavoidably led to infer, *that confinement to bed is the cause of scrofulous disease!!* To the same cause, too, he attributes the wasting of the muscles. Our limits will not allow us to examine this part of the subject so fully as we had intended; but Mr. Shaw's opinion appears to us to be so entirely incorrect, that it is impossible to pass it over without a few comments.

The statement with which Mr. Shaw commences, is, we be-

lieve, founded on misapprehension; at least, we are not aware that any author has published the opinion, that in persons who die of lateral curvature, the bodies of the vertebræ are *generally* found *softened and full of scrofulous matter*. We are acquainted with no author, who seems to have paid so much practical attention to this subject as Mr. Lloyd, and in his work on scrofula, which we have now before us, we find no such observation; though, if it were as general as our author thinks it, we do not see how it could have escaped Mr Lloyd's notice. Mr. Lloyd states, that he believes children of a scrofulous diathesis are more liable than others to the lateral curvature of the spine, and that it arises from their bones being more vascular, and softer than those of other children. He also states, that in scrofulous children, when the curvature has been of great duration, he has *sometimes* met with that morbid deposit in the cancelli of the vertebræ, which he describes as the invariable consequence of scrofulous disease, long existing in a bone; but that when a patient dies with lateral curvature, in whom the scrofulous state of health had long ceased, if the vertebræ be examined, they will be found of their natural and healthy structure.

If the bones being found, "softened and full of a scrofulous substance," is attributable to confinement, how is it, let us ask, that the vertebræ of a patient, who has been long confined with an angular curvature of the spine, are, on examination after death, so often discovered to be of their natural hardness and density? How is it, too, that the bones of a limb, amputated on account of a diseased joint, are never found softened and full of a scrofulous substance, except in cases in which the disease is evidently of a scrofulous nature? Such cases are of frequent occurrence, and therefore we are extremely surprised that Mr. Shaw should not be familiar with them. The cases adduced by Mr. Shaw in his introductory chapter, do not at all prove to us that confinement produces the effect on the bones which he would make us believe: but only that in certain constitutions, bones, when injured, become degenerated and altered in structure. That every part of the body, and therefore the bones, will become in some degree diminished in density from long confinement there can be no doubt, and we well know that the bones of animals which have been over fattened, contain a larger proportion of animal matter than natural; but, under such circumstances, the bones have not the slightest appearance of disease, and much less of being affected with scrofula. It appears, therefore, that our author has theorized from insufficient facts, and consequently has adopted a fallacious hypothesis. The other injurious con-

sequences which our author attributes to confinement, will be considered when we come to the treatment.

Mr. Shaw refers in different parts of his work, to specimens of lateral distortion, in which anchylosis has taken place between the bodies of some of the vertebræ, and which, as well as their processes, are studded with exostoses. He also states, that

"It is not unusual for a patient of *weakly constitution*, and who has lateral distortion, to be attacked by the common *carious disease* of the vertebræ."

From these circumstances, some of our readers will perhaps be disposed to infer, in opposition to our author, that in many cases of lateral curvature, it is by no means impossible that there may be *primarily* a morbid affection of some part of the spine.

Mr. Shaw ascribes the pain which is occasionally felt in the back, by patients who have lateral curvature of the spine, to weakness, and he says that it is quickly relieved by certain exercise, which would tend rather to increase than diminish a pain, consequent on disease of the vertebræ. Our readers, however, must be aware, that in many patients with lateral curvature, the slightest exercise occasions pain in the back.

Our author, in the next place, gives descriptions of the specimens of distortions represented in the plates, and from them he deduces some practical conclusions. From one of the specimens of lateral distortion he infers, as an extensive deposit of the bone has taken place on the surface of the bodies of some of the vertebræ by which anchylosis has been produced, that a considerable degree of inflammation occasionally exists in the vertebræ in such cases; and, secondly, that it is sometimes impossible to cure, even a slight distortion of the spine.

Our readers must have observed that Mr. Shaw distinguishes between the common lateral curvature, and distortion of the spine consequent on rickets. Many of the remarks he makes on this subject are, we believe, the result of inexperience. The argument he uses obviously implies that when rickets exist, the whole of the osseous system must be affected; for he states as his opinion, "that unless some of the long bones, or the bones of the head be affected, however distorted the spine may be, we are not to consider the disease as rickets:" and "that in whatever state of distortion the spine and ribs may be, the bones of the pelvis will not be found distorted, unless there be at the same time marks of rickets in some of the long or solid bones." To these conclusions it is impossible we can expect our readers to assent. As it is quite certain that it is common for the bones of one limb to be affected with rickets,

without the corresponding bones of the other limb being at all affected. It is too much to deny that the bones of the trunk, and, for instance, the sacrum may be so affected, without a similar affection of some of the bones of the extremities; for if one bone may be affected without the rest of the osseous system, there can be no legitimate reason why that one may not be the sacrum. Our author has come to another conclusion from which we are obliged also to dissent. It is, "that the spongy bones, (as those of the spine, carpus, and tarsus) are not so liable to be affected by rickets as the long bones, and those which are more compact in their texture." We, on the other hand, consider that the first appearance of rickets is very commonly evinced in the wrist, and ankles or insteps. From the size and situations of the bones of the carpus and tarsus the effects of the disease on them are necessarily never so great in degree, nor are they perpetuated in them as in the long bones, and from these circumstances we conceive, Mr. Shaw must have deduced his opinions. Although we are compelled to dissent from some of our author's premises, we entirely agree with him in opinion, that in distortions of the spine, the pelvis is comparatively rarely distorted.

The curvature of the spine, which takes place in patients affected with rickets, Mr. Shaw does not believe to be "in consequence of a morbid change in the substance of the vertebræ, but (consistently with his general view of distortion) of the entire weakness of the system, that generally attends the constitution in which rickets prevail."

Our readers having perused the quotations we have already made on the subject of rickets, they will be somewhat surprised at the following observations of our author:—

"I am ready to admit that there *may be instances of distortion of the pelvis, accompanying lateral curvature of the spine, although there be not, at the same time, any distortion of the long bones*; for a weakly constitution may be considered as one great cause of distortion, both of the spine and of the pelvis, it is not improbable that the two affections may be combined in the same person, in various degrees."

The inconsistency is so glaring, we must repeat the observations previously made by our author:—

"*In whatever state of distortion the spine and ribs may be, the bones of the pelvis will not be found distorted, unless there be, at the same time, marks of rickets in some of the long and solid bones.*"

We are sorry to say it, but there are many instances, in the course of the work, of contradictions almost equally complete. It is difficult to account for them; but we conceive they must

arise from Mr. Shaw's constant endeavour to generalize from solitary instances, or a scanty number of facts.

Our author, in the next place, adverts to the effect of distortion of the spine on the viscera. He correctly states that "we have often proofs that, although the viscera are not only altered in shape, but also in their relative position to each other, they still perform their functions properly; and that, contrary to the generally received opinion, persons who are much distorted often attain a good old age." Although it is perfectly certain that, in cases of the greatest distortion of the spine, the viscera often perform their functions properly, yet it is equally certain that, in many cases of distortion, the greatest functional disorder of the different viscera is produced. The functional disorder of the heart and lungs, from this cause, it has long been well known, is often so excessive, as to lead to the supposition that there exists at the same time actual disease of the viscera. That actual visceral disease and distortion of the spine are very often co-existent, there cannot be the slightest doubt; but we very much doubt whether the visceral disease is ever the consequence of the distortion. That both are, very generally, effects of the same constitutional disorder, must be admitted to be extremely probable. Having examined as fully as our limits would allow, the observations made by our author on the opinions generally entertained of the pathology of lateral distortions, we shall, before we proceed to the treatment, briefly reconsider the particular opinions held by himself on this subject.—In a subsequent part of his work, Mr. Shaw, reverting to this part of the subject, says—

"Although I have already dwelt at considerable length on the most frequent causes of that slight curvature of the spine, which, to a superficial observer, is apparent only in an enlargement of one shoulder, it may be useful to recapitulate them shortly here. The first, is the habit of balancing the body on one leg, as demonstrated in the first marginal plate. The second, is in sitting awry, as depicted in the sketch of the girl writing, or playing the harp. The third, is in the position when sleeping, on a soft bed and with a high pillow. The fourth, is in using the right side of the body more than the left. But the inability of a weakly girl, while sitting at work, or practising for hours on the piano-forte, to prevent the lumbar portion of the spine yielding to the weight of the upper part of the body, may be considered as the most frequent cause of distortion.

"Such causes may produce distortion, even though a girl be at the time in good health; but they operate in an increased degree if she be ill, or in the weak condition that generally follows fever or measles."

In another part of his work, our author says—

"The muscles, whose office it is to support the vertebræ, may be so weakened by want of exercise, as to become incapable of performing their functions. When this takes place, the vertebræ and the ligaments, which bind them together, yield to the superincumbent weight, *for they are affected in a secondary manner by the same causes that have produced debility in the muscles.* Weakness of the muscles is, therefore, perhaps, one of the most frequent forerunners of distortion."

From the above quotations, and from observations of a similar tendency, scattered through the work, we collect that our author considers the most frequent causes of the common lateral curvature of the spine, to be the habitually standing and sitting in positions in which the spine is necessarily constantly twisted or awry; "the using the right side of the body more than the left;" and a weakened condition of the muscles, whose office it is to support the vertebræ.

That mal-position, unceasingly maintained, would be sufficient to produce some degree of deformity of the spine we have no doubt, nor have we that the continued violent exercise of the muscles of only one side of the body would produce the same effect; but we very much doubt whether in healthy children, whose spines and muscles are, in every respect, in a natural and healthy state, and who are daily alternately sitting, walking and running, or dancing, such causes, applied, as they necessarily must be, only in so slight a degree, can of themselves occasion the common lateral curvature of the spine. Although, therefore, we deny the *primary*, we admit, to the fullest extent, the *secondary* influence of such causes. We admit that when, from any cause, the muscles, whose office it is to support the vertebræ, have become so weakened as to be incapable of performing their functions, and the vertebræ and their ligaments, from the same cause, yield to the superincumbent weight, such causes, as those stated by our author, will readily and certainly produce distortion.

We beg to recall the attention of our readers to Mr. Shaw's statement, that "weakness of the muscles is, perhaps, one of the most frequent *forerunners* of distortion." Also, "that the vertebræ and their ligaments yield to the superincumbent weight, for they are affected in a secondary manner by the same causes that have produced debility in the muscles." Whoever reads the preceding statements must, we contend, admit that, according to Mr. Shaw's own shewing, a weakened state of the muscles, ligaments, and vertebræ, is a most frequent *forerunner*, or *primary cause* of distortion. Weakness, or a weakened

state, is rather an indefinite expression, and therefore we will examine it by the proper test. In a *natural* and *healthy* state, the muscles of the spine are capable of supporting it in a straight position, and the spine is capable of supporting the superincumbent weight; in a *state of weakness*, neither the spine nor the muscles are capable of performing their functions; ergo, they are in an unnatural or unhealthy state. The weakened state of the muscles, ligaments, and vertebræ, our author ascribes to want of exercise; but that we cannot consider as a sufficient cause in the majority of cases. It frequently happens that out of a large number of children at a boarding-school, all of whom are educated in the same manner, and take the same degree of exercise, not above two or three will be found distorted. We consider, therefore, that the weakness of the muscles and spine depends upon constitutional causes, and perhaps on disorder of the digestive organs, more than on any other. In our author's etiology, however, notwithstanding there is, as we have shewn, the positive evidence of actual disease having existed, in some of the specimens to which he has referred, the influence of disease in the production of lateral distortions is studiously denied; and even the muscles are not allowed to have any active agency. In the statement we have given of Mr. Shaw's opinion of muscular contraction as a cause of lateral distortion, we have avoided the discussion of the question, as in the examination of Dr. Dodd's work, in our next Number, we shall have occasion to bestow on it the fullest consideration.

Treatment.—Before our author gives his own plan of treatment, he examines the merits of the different plans at present in use for the cure of distortions of the spine.

First is the proposal to cure distortions of the spine by friction, thumbing, and shampooing.

These, our readers well know, are the means commonly employed by quacks for the cure of every species of distortion. By the judicious application of such means, the greatest benefit is undoubtedly sometimes effected in contracted limbs; but their indiscriminate application by the mountebank, is often attended by the most injurious effects.

"I may, however, repeat," says our author, "that although the facts discoverable by the examination of the skeleton of a person who has had distortion of the spine, are sufficient to prove that such means as shampooing, &c., cannot restore the distorted spine to its natural condition, still we ought not to neglect or despise these processes, for they are most essential aids in the treatment of certain stages of many diseases of the joints, and especially of those of the spine."

On the proposal to remedy distortions of the spine, by reducing vertebræ said to be dislocated.

"The views," says our author, "of the anatomy and pathology of the spine, upon which the proposal to remedy distortions by reducing vertebræ said to be dislocated has been founded, are already shown to be so very erroneous, that it is almost unnecessary again to take up the question, or to offer fresh facts in proof of the fallacies of the opinion, that the situation of the individual vertebræ in a distorted spine can be changed. But it is incumbent on me to endeavour to explain the cause of the degree of success which occasionally results from the mode of practice followed in the attempts made to change the places of the vertebræ.

"As the process has not been made public, but has been as much as possible kept secret, it cannot be fully canvassed; from the descriptions given by those who have witnessed the operations, we may conclude that the occasional good effects result from the patients being confined to the horizontal position, while the muscles are at the same time kept in such a state of activity by friction and pressure (to soften the bones!!), as to be prevented from wasting. By this mode of giving exercise to the muscles of the spine, the bad effects of close confinement to the same position are, to a certain degree, obviated. But upon this question I shall not dwell longer here, as the discussion in the next chapter is applicable to it."

We entirely agree with our author, that the supposition of the vertebræ being dislocated in distortions of the spine is altogether erroneous. Indeed we consider it demonstratively certain, that no Physician or Surgeon, who had ever acquired even a moderate share of anatomical, physiological, or pathological knowledge, could for a moment have entertained such an opinion. With our author's objections to confinement to the horizontal position as a means of curing distortions we cannot concur, because reason and experience concur in convincing us that they are founded in error. That our readers may have an opportunity of correctly estimating Mr. Shaw's objections, we shall transcribe the whole of his observations on this point.

"The practice of laying a patient on the back, and in the horizontal position, without intermission, for months, and even for years, has of late prevailed very much, in the hope of curing lateral curvatures of the spine. The arguments offered in favour of the plan have been founded on the idea that the distortion depends upon an undue contraction of the muscles of the spine, and on a diseased state of the vertebræ. Taking this view of the cause of distortion, it was imagined that by keeping a patient constantly resting on an inclined or horizontal plane, the irritation proceeding from the supposed disease of the bones would be relieved, and the muscles of both sides being kept in a state of quietude, would be

gradually reduced to the same standard of strength, so that after a certain time, the equilibrium in their actions would be restored.

"It is scarcely necessary to repeat the arguments that have been already offered in refutation of these views, nor are proofs now required to show that every part of the body is weakened and deteriorated by lying dormant. But I may state that it is scarcely possible to imagine any means so effectual, in preventing parts from performing their natural functions, as the plan proposed for the cure of a disease originally proceeding from weakness. Indeed this now begins to be discovered, *and the use of the inclined plane is gradually falling into disrepute.* For it is found, that although a girl who is slightly distorted may become more straight after having been confined to the horizontal position for months, she does not gain strength; but on the contrary, becomes so weak, that she can hardly walk or stand; and when she attempts to sit up without some artificial support, she sinks almost double, or at least into a state worse than she was in when she first lay down. These are sufficient objections to the practice, but the effect which the long continuance in the system has upon the general health, are still more serious. We find that girls who have been long confined to the reclining board are delicate and liable to all the worst symptoms of hysteria; and I have already mentioned an instance of a young lady having so many symptoms of diseased heart, that she was treated accordingly, although they were afterwards proved to have proceeded from the weakness caused by long confinement to one position.

"But in making these observations, I beg it may be distinctly understood, that they have reference only to the common notion, that close and strict confinement to one particular position is the most probable mode of remedying distortions. Indeed, in the chapters descriptive of what I suppose to be the best mode of treating distortions, it will be found that I consider the use of the inclined plane as essential to the cure of lateral curvature. Nay, I would even recommend that a delicate girl, although she may not be in the slightest degree distorted, should lie for some time every day upon the plane. When a girl is growing rapidly, and is at the same time delicate, the weight of the upper part of the body is obviously so much more than the lumbar vertebræ can support beyond a certain time, that common sense dictates the necessity of giving ease and rest to the spine; and this cannot be more easily and effectually done, than by lying down occasionally on the inclined plane. But this, like many other useful remedies, has been abused, from not paying sufficient attention to the great variety of affections to which the spine is liable."

We would not have it for a moment supposed that we intend to accuse Mr. Shaw of being an old woman, or of courting public favour at the expense of his judgment (indeed we have a high opinion of him as a good and honourable man; and

though we differ from him in opinion, we do not at all deny his talent); but it is quite certain that his objections to the horizontal position accord with the prejudices of every old lady in the land. We merely mention this as a curious coincidence. We proceed to examine Mr. Shaw's objections in detail. We consider that nothing our author has said tends in the least to prove that muscular contraction does not contribute to the production and to the continuance of lateral distortion of the spine. We still believe that it does, and that as long as the health continues impaired, rest is an essential part of the treatment; but, for the reason stated before, we shall not pursue the consideration of it here. Another argument offered, he says, in favour of the horizontal position is, that there is a diseased state of the vertebræ. He denies that the vertebræ are ever diseased in lateral curvature: we contend that in most cases they are more or less so, and that the horizontal position is therefore necessary. Our readers should recollect, that by diseased, it is not meant that the vertebræ are carious or ulcerated; but that some change has taken place in their structure, as a diminution of their natural density and firmness, or an increase of their vascularity. We maintain too, that the cases adduced by Mr. Shaw himself, render this at least a probable opinion. Our author is, we believe mistaken, when he states that it is imagined that the horizontal position alone will remove the unhealthy condition of the spine, for every author with whose opinions we are acquainted, insists on the necessity of employing other coadjutant measures. Mr. Baynton, the early and strenuous supporter of the horizontal position, we know always administered constitutional remedies; and we see in Mr. Lloyd's work that he considers local and constitutional measures as essential parts of the treatment. We admit that the advocates of the horizontal position believe that it alone, if proper means are taken to restore the health, will remove the deformity, in cases of common lateral curvature which are not of very long standing, nor excessive in degree. We may add too, that this is a truth that we have seen so often verified, that we cannot have any doubt of it.

In a state of health, there can be no doubt that inaction tends to weaken the body, and exercise to strengthen it; but in a state of disease, it is often the reverse: for exercise, in many cases, would, undoubtedly, increase disease, and consequently weaken; while inaction, on the contrary, gives to parts which are diseased an opportunity to recover their health, and consequently their strength; and this, whether it is the whole, or only a part of the body which is affected. For all

these reasons, therefore, we contend, that the horizontal position, instead of weakening and preventing parts from performing their natural functions, conduces more than any other means to the restoration of their health, and of their natural condition; and consequently, that the objection of its producing weakness is ill founded, and wholly suppositious.

We believe that the inclined plane was never so much employed as at present, and therefore, that the statement that it is gradually falling into disrepute, is wholly without foundation. We believe, too, that Mr. Shaw's statement of the ill effects produced on the general health and strength is equally groundless. Indeed, very extensive practical experience enables us to say, that we feel certain that, in the greater number of cases, if proper constitutional means are employed, the general health will be improved by confinement to the horizontal position, and that instead of the body being, as he describes, so terribly weakened, it will generally be found to be, in a very short time after rising, much more capable of enduring muscular exertion than had been the case for months or even years before.

We have, moreover, in cases of lateral curvature of the spine, frequently known the worst symptoms of hysteria, which had long existed and obstinately resisted every means that had been tried for their cure, speedily relieved by confinement to the horizontal position; and we can conscientiously declare, that we never knew a single instance of such symptoms coming on as a consequence of the mere confinement to the inclined plane or horizontal position. We are perfectly aware that such symptoms are by no means uncommon, when forcible measures, such as stretching and shampooing, are at the same time employed, but in such cases, they must obviously be considered as the effects of the violence and not of the confinement. Such being our opinion of confinement to the horizontal position, as a mode of cure in lateral distortions of the spine, we feel bound to express our conviction that all Mr. Shaw's objections are founded in prejudice or inexperience.

Our author very properly condemns the mode of treating distortions of the spine by machines fixed to the body. His observations principally apply to the machines employed by Mr. Chesher, of Hinkley. The principle on which all such machines act, is that of forcibly elevating, stretching, or elongating the spine. We believe that all such instruments have a most injurious tendency, and therefore it would, we consider, be needlessly occupying the attention of our readers to follow Mr. Shaw in his descriptions of them.

"The objection," says our author, "most frequently made to the

use of the machine is, that there is danger of the bones of the pelvis being compressed, and of the natural openings being diminished, from which the most serious consequences may result, when the patient arrives at a certain age. As this opinion is very general, I have been at considerable pains to investigate its truth; my enquiries have led me to believe, that although the forms of the instrument seems calculated to distort the bones of the pelvis, the machine will not have the effect, except in certain cases, which may be easily distinguished from the more common ones."

Our author wishes it to be recollected, that his objections refer only to the attempts made to *cure* lateral curvatures of the spine, by the constant wearing of instruments. Certain cases of disease of the vertebræ may be benefited by instruments, and he considers that some kind of instrument is necessary to the cure of lateral distortion. Our author reminds us, that although he objects to attempt to cure distortions by forcibly elevating the spine, one of his plans of treatment is to elevate the spine. The means of doing this will, he says, be described in the chapter on the treatment.

It has been proposed to cure distortions of the spine by carrying a weight on the head; but, says our author, we shall be much disappointed if we trust entirely to this method of treatment; for although it is, if properly managed, a useful adjunct in slight cases, still it is not in itself effectual in curing distortion.

Some caution is necessary in the employment of this method of treatment, for if too great a weight be employed, there is danger of the pelvis being diminished, in consequence of the two last lumbar vertebræ and the upper part of the sacrum being driven inwards. This plan is not a modern discovery, for it was recommended in a book entitled "*Orthopœdia*," which was published in 1723, by Andry, Professor and Dean of the Faculty of Physic in Paris.

As our readers have seen that Mr. Shaw considers muscular weakness the result of inaction, as one of the most frequent forerunners or primary causes of lateral distortions, they will not be surprised that he recommends exercise as more effectual than any single mode of treatment in counteracting or curing slight distortions of the spine. It has been imagined, says our author, that the more violent the exercise is, the more probability there is of success.

"But the numerous facts offered in the preceding pages, to prove the variety of affections, on which distortions of the spine depend, show that the indiscriminate use of violent exercise may be useless or injurious in some cases, and even dangerous in others."

Mr. Shaw points out the great danger of using violent exercise in cases in which there has been actual disease of the vertebræ and subsequent anchylosis. He correctly states, that the spine is weaker and more easy to be broken at the anchylosed part than at any other. He adds in a note, that

"It scarcely ever happens that a person who had had caries of the spine, is able to walk, unless the vertebræ be firmly united by bony matter."

In this statement, our author is decidedly wrong. We ourselves possess preparations of diseased spines, which were taken from patients who had long suffered from the effects of angular curvature, but who were supposed to have recovered, and were capable of taking considerable exercise, in which no bony union has taken place.

"The chief difficulty," says our author, "in the cure of distortions, consists in the proper application or combination of the several modes of treatment."

In the cure too, it is obviously of the greatest importance to guard against the continued operation of those causes which have a tendency to produce distortion. Attention to the manner of sitting and resting, will perhaps be sufficient in cases where the spine is slightly distorted. But effectual means must be used to prevent the lumbar portion of the spine from yielding to the weight of the upper part of the body. Our author very properly objects to the constant employment of any means which tend forcibly to keep parts in their natural situation; as by such means the muscles which of themselves should support the parts, are retained in a state of relaxation, and thereby rendered daily less able to perform their functions.

Portal, in his work on rickets, after some observations on the condition of the muscular power and shape of men who follow different trades, says,

"Do not these afford so many lessons which should be remembered, when we endeavour to restore the shape of children, whose figure or limbs have become distorted? we ought to consider the effects caused by using particular classes of muscles, as examples in favour of such exercises as will strengthen those muscles which are weakest."

Mr. Shaw adopts the observations and opinions of Portal, and pursues a precisely similar train of reasoning, and with Portal recommends for the cure of distortions, a variety of exercises founded on the principles stated above. For the purpose of exercising particular sets of muscles, he has invented different machines, of which he has given diagrams and descriptions of the modes of using them. The machines appear appropriate to

their purposes, but for the descriptions of them we must refer our readers to the work itself, as our limits will not allow us to detail them. There is danger, says our author, of the curves being increased by inappropriate exercises, and therefore it is absolutely necessary they should be superintended by a medical practitioner.

Our author concludes the consideration of the means necessary for the cure of slight lateral curvature, with the following observations :—

"Previous to describing the means that are necessary to cure a confirmed twist, I may state, that although, in slight cases, properly regulated exercises are very beneficial; still, comparatively, little good will be derived from them, unless strict attention be at the same time paid to the patient's manner of sitting and standing. Particular care ought also to be taken that she should not lie crooked in bed, and that she should use a mattrass instead of a feather-bed, with the head as little elevated as possible. Although the practice followed of confining patients with slight distortion to the inclined plane for months, without intermission, *has been shewn to be bad,* yet lying for a certain time on the plane, and especially after having gone through the proper exercises, is of the greatest use to those who are slightly distorted. With reference to the question of the propriety of rubbing or shampooing, I would say that it is a species of exercise, of which a patient cannot have too much."

"*Confirmed Lateral Distortion of the Spine.*"—When we are consulted about a patient with confirmed lateral or even slight distortion, it obviously is of the greatest importance that we make a particular and careful examination. The point most necessary to be ascertained is, whether it is a case of simple lateral distortion, or of distortion complicated with actual disease of the vertebræ. It is, however, also necessary to ascertain how long the distortion has existed, the present state of the patient's health, and the state of health in which he was before the distortion took place. By strictly enquiring into these points, we shall necessarily become acquainted with every thing it is really important we should know respecting the nature and history of the case, and therefore we cannot recommend our readers to make the very minute examination directed by our author. The less of parade and ceremony that are employed on such occasions, the better, we are convinced it is, both for the credit of the surgeon, and for the feelings of the patient; and therefore, the sooner Mr. Shaw discontinues his present mode of examination, the more creditable it will be to him. Nothing, certainly, should ever be done merely for the sake of *effect;* nor should the surgeon ever give his patient the slightest additional uneasiness or trouble, merely to gratify his

own curiosity. In examining a young lady with lateral curvature of the spine, is it really necessary to "examine whether the *thighs* and bones of the legs are perfectly straight;" or to be dotting the back with ink, to mark the spinous processes of the several vertebræ; or to stretch the spine by means of a double pulley, fixed to the top of a door, that the characters of the curves may be more satisfactorily ascertained; or, lastly, is it really necessary that the alterations in the form of the *individual ribs* should be particularly attended to?

"The importance," says our author, "of making a careful examination of *all the irregularities* in the form, is shewn by the history of the case in the foot note, which also affords a good example of the sufferings, to which girls with slight distortion of the spine are subjected, in consequence of the *erroneous notions that prevail on the causes and symptoms of distortion.*"

The case in the note, is that of a young lady, in whom the nature of a fulness of the right side of the neck, consequent on distortion of the spine, was mistaken by the "family apothecary," "by another gentleman who was consulted," and by an "eminent surgeon." The apothecary applied leeches and a blister to reduce the swelling! the gentleman ordered it to be rubbed with a liniment! and the eminent surgeon treated it as "a mere fancy!!" The consequences of these mistakes were, that the young lady suffered unnecessarily severe treatment, by which her health was at one time seriously impaired, and she became incurably deformed. The particulars which we have detailed, must evidently have been communicated to Mr. Shaw by the patient, or by some of her friends; and as the histories of cases derived from such sources can never be depended upon, we must, without meaning in the least to doubt Mr. Shaw's correctness, claim our right of withholding implicit credence in this instance. We moreover very much doubt that such erroneous notions prevail on the causes and symptoms of distortions, for we have a far better opinion of the members of our profession in general, than our author appears to entertain.

"In considering the possibility of curing a distorted spine," says our author, "it may be stated, that if the patient is young, and there be no anchylosis, nor any symptoms of rickets or disease of the bones: if the cervical or upper dorsal vertebræ are not so much distorted as to form a large swelling on one side of the neck; and if the middle of the ribs are not yet become angular, we may safely promise to make the patient much better: but in justice to ourselves, we ought to state, that all our attempts will be ineffectual unless the patient assists by submitting cheerfully to the rules laid down. A girl, even so young as thirteen, with a distorted spine, has no

time to lose, and if she expects to have her shape restored, she must consider the attempt to remedy it, as her sole object for months."

The earlier the proper treatment is employed in distortion the better, for after a distortion has proceeded to a certain extent, it becomes rapidly worse, if neglected, and the longer it continues, the less susceptible it is of remedy. In attempting to cure confirmed lateral curvature, we must endeavour, says our author, to attain the following objects :—

"First, to act upon the spine so as to alter the present position of the vertebræ, and consequently of the ribs and shoulders." "Secondly, to keep the vertebræ in the new and improved position." "The third and most essential object is to bring the muscles of the back into such a condition, that they will, after a certain time, be capable of retaining *the spine* in its natural position, without the aid of any artificial support."

The means employed by our author to attain the objects stated above, are instruments to *stretch* and *elevate* the spine; instruments to support the spine in certain positions; various modes of exercising certain sets of muscles; the occasional use of the inclined plane or horizontal position; particular attention to position in standing, sitting, and lying down, and all the different modes of excitement, as friction, shampooing, pressure, percussion, &c. The manner of employing these different means is detailed by our author at considerable length, but our limits will not allow us to follow him; and therefore we must refer such of our readers as wish to be acquainted with them, to the work itself. Before our author concludes his observations on the treatment of confirmed lateral curvature, he states, that

"It is scarcely necessary to add, that during the treatment of every case of distortion, great care should be paid to the regulation of the diet, and to the state of the bowels: we should also endeavour to strengthen the system generally, by every means which experience has shewn to be conducive to health."

In conclusion, our author makes the following observations:—

"I hope that the distinctions which have been drawn between the distortion consequent on rickets, and those which are independent of any disease of the bones, will be found useful in practice. It will perhaps be admitted, that had it not been for the idea which is so generally prevalent, that lateral distortion depends on rickets, or on the softening of the bones, the examples daily afforded us of the activity and strength of distorted persons, in the lower ranks of life, would, long ere this, have led to rules of practice different from those at present followed in the treatment of such cases. Hitherto it has always been dreaded, that in the attempt to cure distortions of the spine by instruments, deformity of the pelvis would be produced; and if it were attempted to be remedied by muscular exer-

tion, that the bones in their supposed softened condition would be twisted. The facts which have been stated in the course of this work are, perhaps, sufficiently numerous to afford reason for suspecting that the consequence of these opinions has been, that many cases which might have been cured at an early stage, have been so mismanaged, that the chest has at last been distorted in such a manner as to make the patient miserable for life. It will perhaps also be acknowledged, that even after patients have been reduced to this condition, their sufferings have been increased, in consequence of their being, from a mistaken notion, nursed, and prevented from taking such exercise as would tend to strengthen the muscles, which, even in the greatest degree of distortion, are still the natural supporters of the frame. We are, at first, induced to pity those unfortunate persons in the lower ranks of life, who, though distorted, are obliged to exert themselves; but, on enquiring into their condition, we find that they are comparatively comfortable, and are even capable of exerting themselves, without even suffering the slightest inconvenience."

Having thus concluded our analysis of Mr. Shaw's work, we proceed to state the impressions which it has left on our minds. We stated at the commencement of this article, that the work under consideration contained many judicious observations, but that we had not been able to discover in it a single fact with which we were not previously acquainted. A second and more attentive perusal has confirmed us in the opinion which we expressed at first. The correctness of many of Mr. Shaw's inferences, it has been seen that we altogether deny. The distinctions which he draws between distortions consequent on rickets, and those which are independent of any disease of the bones, will, we feel convinced, be found to exist more in theory than practice. He infers, that they will be found useful in practice; and yet he previously informs us, that the bones of the spine are not affected by rickets; and consequently, that when in a ricketty subject distortion of the spine takes place, it is not to be considered as dependent on a morbid affection of the vertebræ, but on the general debility of the muscles, which always attends those cases, and is, in Mr. Shaw's opinion, the most frequent forerunner of all lateral curvature of the spine. Such being the case, what real use can it be to us to know, that a patient with distorted spine has had a ricketty affection of the long bones? We say, *has had* a ricketty affection of the long bones, because it almost invariably happens that the true ricketty condition of the bones ceases long before the age at which we are oftener consulted by patients suffering from lateral curvature of the spine. The effects—the distortion of the bones, which are the consequence of a *former* ricketty state, undoubt-

edly remain, and they are generally the only evidence of rickets that exist at the time of puberty, the time at which, it must be allowed, we are most frequently consulted about patients with common lateral curvature. We must beg to remind our readers, that we are arguing against the broad line of distinction attempted to be drawn by our author, and not at all against the probability of the vertebræ being, in some cases, affected by rickets, and certainly not against the opinion that the affection of the spine itself is sometimes the cause of lateral curvature. Indeed we conceive that we cannot be mistaken on this point, because we have stated before that we firmly believe that the whole of the bones, ligaments, and muscles of the spine, are more or less in an unhealthy and weakened condition at the time that lateral distortion is taking place. We, moreover, stated, that we considered the affection of the spine to be consequent on disorder of the health; and that as the general health improved, the spine regained its natural and healthy condition. If it be admitted, and we say it cannot be denied, as we have daily proofs of it, that the vertebræ may be diseased and yet recover, there is no good reason why we should be surprised at the examples afforded us of the activity and strength of distorted persons; for although the distortion may originally have depended upon rickets, or on a softening of the bones, the bones may have long since regained their natural and healthy condition. When the vertebræ are in a healthy state, we can see no reason why the muscles should not act with their natural power and activity. The great strength and activity which are sometimes evinced by persons who have been long distorted, cannot therefore legitimately be used in the way our author uses it, as an argument to prove that distortions do not originally depend on a morbid condition of the bones, and still less as an argument to prove that they depend wholly on muscular weakness. Our author also, from the same circumstances, would deduce an argument in favour of the propriety of employing exercise as the principal mode of cure in distortions, but it appears to us that he equally fails in this point. We consider that it might almost as fairly be argued, that a delicate and sickly female is as capable as a vigorous and healthy man, of enduring violent and laborious exercise, as that active exertion is suitable and proper in the early stage of distortion in a young and weakly girl, because it may be employed with impunity by an older person, in a more advanced stage, when the health and strength are regained. Again, we must beg not to be misundersood. Although we object to the employment of exercise in the early stage of distortions, we do not object to it at a later period;

indeed, we consider it then as an essential part of the treatment; and all we contend for is, that proper preparatory measures should always be previously adopted. Our limits not permitting us further to recapitulate, we hasten to a conclusion. Differing in opinion, as we have shewn we do, from Mr. Shaw, on many important points, it cannot be supposed that the general impression which we have received from his work is extremely favourable. We, nevertheless, freely give Mr. Shaw credit for having displayed great industry, and no inconsiderable talent for observation, in the investigation of his subject; and we are disposed to attribute the false views, which it appears to us he has taken on certain points, rather to insufficient experience, and trusting to Museum preparation, procured from dissecting rooms, than to error of judgment.

QUARTERLY HISTORY

OF

IMPROVEMENTS AND DISCOVERIES,

BOTH AT HOME AND ABROAD.

IN

Anatomy,	Surgery,	Materia Medica,
Physiology,	Practice of Physic,	Pharmacy,
Pathology,	Midwifery,	Chemistry,
Morbid Dissections,	Forensic Medicine,	Botany, &c.

Forming a useful Library of Practical reference.

I. ANATOMY.

The fundamental knowledge on which all medical science is primarily built, seems to be cultivated every day with more ardour, evidently in consequence of the greater importance which morbid and pathological anatomy is rapidly acquiring. The works of Lizars and Cloquet still keep the lead among those illustrated by figures; but there are many smaller works, both at home and abroad, well worth the study of the young surgeon; while several monographs on particular parts, concentrate all that is worth knowing respecting them. Dutertre's anatomical plates, according to the system of Chaussier, are good.

Horner's *Lessons* *.—This work is somewhat on the plan of the manuals of Stanley, Green, and Shaw, and is highly creditable to the very active and rising medical schools of America. Dr. Horner, besides, is no second rate anatomist, having had the honour of discovering a new muscle in the eye, of which, as a specimen of his book, we shall extract his description.

The Tensor Tarsi Muscle of the Eye.

"At the internal canthus of the orbit is a small muscle belonging to the internal commissure of the eye-lids, which has not been observed before, or is omitted in the description of the part. That it does not belong to either of the above, [obliquus superior, et inferior,] or to the orbicularis palpebrarum, a reference to every minute account of them, given by the most eminent anatomists, will prove.

"This muscle is about three lines broad, and six lines long—arising from the posterior flat surface of the os unguis, near its junction with the os ethmoides, and passes forwards and outwards, lying on the posterior face of the lachrymal ducts. As it approaches the commissure of the lids, it splits into two parts, nearly equal, each of which is appropriated to a duct, and inserted along its course, almost to the punctum lachrymale.

"To get a distinct view of it, the eye-lids must be separated from the eye, and turned over the nose, leaving the tendinous attachment of the orbicularis and ciliaris muscles. The valva semilunaris is brought into sight by this process, which must be dissected away, and also the fat and cellular membrane underneath it. The muscle is now seen, and by passing bristles through the lachrymal ducts, its connexion with them is rendered evident: at the same time we get a good idea of its size, origin, and insertion. While making this inspection, by turning the muscle somewhat aside, we shall be rendered sensible of another fact of some importance—that the attachment of the inner commissure of the eye-lids to the canthus of the orbit is imperfectly described, even by anatomists of much minuteness in their accounts. It is attributed exclusively to the tendon of the orbicularis muscle, so much so, that in the operation for fistula lachrymalis, we are enjoined not to cut through the tendon, least a puckering of the eye-lids be produced by their line of extension being destroyed. The fact, on the contrary, is, that a ligamentous matter behind this tendon, passes between the internal extremity of the posterior flat surface of the os unguis—so that, admitting the tendon of the orbicularis to be cut through, this ligament, assisted by the little muscle described, would prevent the dreaded deformity. The internal extremity of this posterior ligament, is at least half an inch from the insertion of the orbicularis tendon into the usual process, and it brings into a curve

* Lessons in Practical Anatomy, for the use of Dissectors. By W. E. Horner, M.D. Adj. Prof. Anat. Univers. Pennsylvania.

commonly seen at their junction. The lachrymal ducts, involved in this posterior ligament, passing along it into the sac, instead of going along the edges of the commissure, as commonly described just under the skin, must influence considerably the position of the puncta lachrymalia, by drawing them towards the ball of the eye, and keeping them in close contact with it: it is therefore a very efficient means for regulating, so far, the lachrymal passages, and for securing the course of the tears. I am indebted to Dr. Physick for a further suggestion in regard to its other uses, which appears highly probable. In cases of extreme emaciation, it is well known that the adipose matter around the ball of the eye, is more or less absorbed, causing it to sink deeper into the orbit, and consequently to retire somewhat from the lids. The effect of the muscle is to draw the lids backwards, and to keep them applied on the ball. Again, in the elevation of the upper lid, or rather the drawing of it within the orbit by the levator palpebræ, the tendency of the margin of the lid is to leave the ball; the upper part of the little muscle obviates this tendency. As such appears to be the actions of the parts, I must, therefore, coincide with him in calling it tensor tarsi, a name expressive of its function."—p. 116.

To obtain a view of this muscle in its natural relations, or without reversing it, we may introduce a bristle into each punctum, and cut the orbicularis occuli across, about the sixteenth of an inch from the puncta, and turn this part towards the external angle. The small flap of the orbicularis may then be raised and turned over on its tendon, which may be divided so as to allow us to raise sufficiently, without entirely removing it. By pressing on the ends of the bristles, so as to raise and tighten the puncta, we see at once the course of the muscle, and may, with great facility, display its fibres as they stretch out on the puncta, as they come off from the common origin.

The great work of Bichât* has lately been translated in rather a Frenchified style; it must be a great acquisition to the library of those who cannot peruse the original; though we should prefer seeing it in a more compendious form. May we ask what has become of Mr. Wallace's work on this compendious plan, which has been so long announced as in the press? Beclard's† work, reviewed in our last number, is precisely formed on this plan, and is excellent.

Tiedemann *on the Nerves of the Uterus*‡.—This celebrated anatomist, whose discoveries we have so often to praise, has re-

* General Anatomy, applied to Physiology and the Practice of Medicine. By X. Bichât. Translated by C. Coffin. Part I. p. 743. Lond. 1824.

† Elémens d'Anatomie Générale, &c. Par. P. A. Beclard, d'Angers. p. 728, 8vo. Paris, 1823.

‡ Tabulæ Nervorum Uteri. F. Tiedemann, M.D. Heidelberg.

cently published a splendid work with plates, on the obscure and difficult subject of the uterine nerves. They form six plexuses, and he traces them to the great sympathetic of either side, which sends, contrary to the common opinion, many considerable branches to the uterus. These nerves are soft, reddish, and are applied to the coats of the arteries on entering the substance of the uterus, where they all at once disappear.

"The first he calls the spermatic, or common plexus of the ovaries and Fallopian tubes: it is situated on the anterior face of the abdominal aorta, at the root of the internal spermatic artery. Composed of many filaments which come from the renal nerves of both sides, descends into the pelvis with the spermatic artery, and goes to distribute itself principally on the ovary and Fallopian tube, although a few branches are likewise sent to the uterus. The second, which is the most important of the whole, is denominated the *great superior lumbar plexus*, or common uterine: it arises from the renal and superior lumbar ganglions of the great sympathetic; it is situated before the fifth lumbar vertebra, before the common iliac arteries, and extends to the promontory; there it divides into two portions, which penetrate into the pelvis, where they immediately form two plexuses, which he calls the hypogastric or lateral uterine, and to which some threads run from the first and second ganglions. Each of these plexuses sends many filaments to the uterus; they accompany the uterine artery, with the ramifications of which they penetrate the substance of that organ. From the sides of the superior lateral hypogastric plexus, many branches go off to the neck of the uterus and vagina, and which, having united with anterior branches of the third and fourth sacral nerves, form a grand plexus, which the author calls the inferior lateral hypogastric. This plexus supplies branches to the uterus, vagina, bladder, and rectum; the ramifications always accompany the uterine artery, which they surround like net-work."

Meckel's *Comparative Anatomy* *.—The first volume only of this very erudite work has appeared from the German press, containing general anatomy, which would, we think, have more naturally followed the particular anatomy, as the parts must be known † before general inferences can be understood. We shall give a specimen of his generalizing.

"*Law of Variety.*—This is the first law of animal formation, and is founded both on the diversity of individuals, and the varieties of organized bodies in general. The same organization is composed of parts, organs, or systems, more or less different, and the divisions of the same system are also varied; while different organizations vary from one another, as much in degree as in kind, as in

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* System der vergleichenden Anatomie. J. F. Meckel. Halle.

those groups called by naturalists, varieties, species, genera, orders, classes, &c.; which, more or less, mutually approach or recede. There are also the two great divisions, male and female, in general less striking, but not less remarkable. This law is also manifested at the different periods of life, by what may be called *periodic diversities.*"

"*Law of Identity, Analogy, and Reduction.*—This is the second law of primal formation, without which, as it points to resemblance, the first law could not be understood, as organized systems coincide with one another in certain general conditions of form, in spite of their differential characters. The character of the species, for example, is deeply impressed upon the organization, notwithstanding the general resemblance of the general organization."

All this appears to us to be extremely useless, either for the purposes of science or the art of dissecting; while it is in some measure unintelligible, it appears scarcely worth understanding. The great subject of controversy respecting the classification of the animal kingdom is taken up by M. Meckel, and he refutes with great learning, the antagonists of the system of vertebrated and invertebrated animals. His division is different from Cuvier's.

"*Divisions of the Animal Kingdom.*—1. Protozois; 2. Echinodermata; 3. Annelides; 4. Insecta; 5. Arachnides; 6. Crustaceæ; 7. Cirrhipedes; 8. Molluscæ; 9. Pisces; 10. Reptilia; 11. Aves; 12. Mammiferæ."

He places the cephalopodes between the vertebrated and invertebrated animals, because they have the rudiments of a vertebral column. His greatest effort of generalization is to trace the numerous diversities of animal forms to a *primitive type*, which, according to him, can always be discovered both in regular and anomalous instances.—This we consider to be altogether an absurd dream. We should greatly prefer indeed, M. Meckel's really anatomical researches, to such useless speculations.

M. Geoffroy's *Osteologié* *.—By new illustrations taken from recent dissections, this distinguished naturalist proves his former position, that "fishes, in their first age, are in the same condition, relatively to their entire development, as the fœtuses of the mammalia." Our author, ingenious as we allow him to be, has a most determined propensity to travesty established facts, and confound all our previous knowledge, by his efforts after originality: the calling the shell of a lobster its spine, for example.

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* Considerations et Rapports Nouveaux d'Osteologie Comparées. Par. M. Geoffroy, St. Hilaire.

M. Bailly's *Anatomy and Physiology of the Nerves* *.—This Memoir contains a very ample and complete account of the recent researches respecting the nerves, with certain claims of the author to priority of experiment, in several points, to M. Magendie.

Dr. Knox *on the Eye* †.—In a very excellent paper in the Edinburgh Philosophical Transactions, Dr. Knox has given some curious facts respecting the comparative structure of the parts of the eye. The author regards as two distinct membranes, the internal lamina of the sclerotic coat, and the membrane of the aqueous humour. He also calls the ciliary ganglion, the ciliary muscle; and contrary to other anatomists, finds the *foramen centrale* of Söemmering in several animals, such as in some lizards.

M. Auzoux's *Anatomical Imitations* ‡.—This ingenious young man has contrived Anatomical models which can be taken to pieces as in dissection, shewing the natural situation and colour of all the bones, muscles, viscera, glands, vessels, and nerves;—and though we do not approve of studying anatomy in this way, yet it may be turned occasionally to very good account in demonstrations as well as in private study.

II. PHYSIOLOGY.

The experimentalists in this department continue to pursue their researches with unabated vigour, though we think, that Pathology is gaining ground on Physiology, at least in the number of inquirers. We are glad to observe this, though we fear it may be carried too far: they ought always to go hand in hand.

Dr. Hale's *Prize Dissertations* §.—Our brethren in America deserve very highly of the profession, not so much for their original discoveries as for their careful repetition of the experiments of others, and adding additional proofs to important facts. Dr. Hale, in writing for the Boylston prize, undertook to repeat, in many instances, on his own person, the experiments of Darwin, Home, and others, respecting the communication between the stomach and the urinary organs. We cannot spare room for the experiments themselves, which were conducted, however, in some cases, with more ardour than

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* Memoire sur le Traité d'Anatomie et de Physiologie comparées du Systéme Nerveux, &c. Par. E. M. Bailly, D. M. P. &c.

† Observations on the Comparative Anatomy of the Eye. By Robert Knox, M.D.

‡ Bulletin des Sciences Medicales.

§ Boylston Medical Prize Dissertations, &c. By E. Hale, jun. M.D. pp. 135, 8vo. Boston.

accuracy—but we shall state, as a specimen of the work, the conclusions he deduced.

1. "The speedy discharge of watery urine, after taking a large quantity of liquid in drink, is not occasioned by sympathetic excitement of the urinary organs, but by the actual excretion of the fluid received.

2. "The same portions of fluid, which are received into the stomach, begin, under certain circumstances at least, to be collected in the bladder within twenty minutes from the time when they are taken.

3. "When a large quantity of fluid is taken, the excretion of urine is greatly increased; but the increase does not bear any very exact proportion to the quantity of drink. The increased discharge begins in about twenty minutes, is at its height in about an hour, and terminates generally in less than two hours.

4. "When a liquid, which is coloured with rhubarb, is taken, the colour of the rhubarb appears in the urine; and its appearance in that excretion is not at all confined to the time of the increased discharge, which is occasioned by the quantity of fluid received.

5. "When a liquid, which is of such a nature as to admit of ready detection in the animal fluids, is taken into the stomach, if the quantity is sufficiently large to affect the whole mass of blood, it will be found in the blood drawn from the veins as soon as in the urine; although it will continue to appear in the urine after it has disappeared from the blood.

6. "When a quantity of colouring matter, sufficient to affect the whole mass of blood, is taken, mixed with a large quantity of liquid, the colour appears in the urine as soon, at least, as the excretion begins to be increased, and is at the deepest before the increase of urine is at the height; but if the quantity of colouring matter be only a little more than sufficient to tinge the amount of liquid taken, it does not appear in the urine until after a quantity of watery urine has been passed, and does not give its deepest colour until after the excretion has diminished."

M. Geoffroy *on the Respiration of the Fœtus**.—Our author read a Memoir on this interesting subject, to the academy of sciences in November last. Setting out with the principle that there is no organization without the combination of a fluid, and no assimilation without oxygenation or respiration: he tried to prove

"That a respirable gas exists in the liquor amnii, the presence of which appeared to be indicated in the experiments of MM. Chevreul and Lassaigne.—That the fœtus, by means of its pores like the tracheæ of aquatic insects, separates the air contained in the surrounding fluid, and brings into contact with it the venous blood filling the vessels of the skin.—That the contraction of the uterus and the abdominal muscles, forms the compressing power which directs this phenomenon in the same manner as in the act of ordinary respiration."

* Revue Medicale. Dec.

That this *may* be so, we shall not deny; but we confess, that to us it appears equally fanciful with most of the author's researches.

M. Flourens' *Memoirs on the Nervous System* *.—The imputation of having borrowed from Rolando, seems to have stimulated our author to redoubled exertion, as will be seen from the following notices of Memoirs read by him at the sittings of the Academy of Sciences :—

"In his preceding experiments, the author has established, that the removal of the lobes of the brain was followed by loss of sight and hearing. In order to ascertain if the other senses were destroyed in the same manner, he endeavoured to ensure, as long as possible, the survival of animals in which he had removed those parts : and some, in fact, did live six, eight, and ten months. During that period, they gave no signs of sensation or volition, whence he concludes that those powers reside exclusively in the lobes of the brain.—In experiments made to ascertain if all the sensations remained in the same situation, or each in a distinct one, he found that in graduated injuries of the cerebral lobes, if one sensation remains, all do; if one be lost, so are all; and, consequently, the faculty of sensation is essentially but one. The experiments of M. Flourens tend, also, to prove that injuries of the cerebral lobes, tubercula quadrigemina, and cerebellum, produce symptoms affecting the opposite side of the body, whilst it is the reverse in injuries of the medulla spinalis and oblongata.

"At the sitting of October 27th, M. Flourens read a Memoir on the action of the nervous system in the involuntary motions. He had been induced to believe that the regulation of the powers of locomotion resided in the cerebellum. He wished to ascertain whether there did not exist some similar centre of regulation of the involuntary motions. Very varied experiments on the influence of the parts of the spinal cord and encephalon, have led him to place this centre in the medulla oblongata. All the involuntary motions, however, are not derived from and regulated by this centre, but only respiration, and the motions connected with it; the motions of the circulatory and digestive system depending only mediately and consecutively on the nervous system. Thus M. Flourens has seen circulation continue a considerable time in animals recently born, although the nervous system had been destroyed, and when, consequently, their blood was black.

"Sitting of November 24, 1823, M. Flourens read another Memoir, on the determinate, or specific action of certain substances on particular parts of the brain.—It is known that certain substances, introduced into the digestive or circulatory system, act specifically on the brain; but it had not hitherto been explained why these substances, all acting on the same organ, should pro-

* Revue Medicale.

duce different results. M. Flourens, whose previous experiments had shewn that the brain was composed of parts having different functions, made additional ones to explain these singular differences, by the specific action of particular substances on particular parts of the brain.—The result is—1. That, in given doses, opium acts exclusively on the cerebral lobes; belladonna on the tubercula quadrigemina; and alcohol on the cerebellum.—2. That the consequence of the action of each substance on such part, is absolutely the same with that of mechanical injury.—3. That the action of each substance always leaves after death, and even determines during life, traces sufficient to distinguish the organ affected from the others.—4. That camphor, ether, &c., act in a similar manner to alcohol; the aqueous extracts of hyoscyamus, lactuca virosa, &c., in a manner analogous to opium.

The Number of Magendie's Journal of Physiology * just received, contains only three papers, namely, the continuation of M. Gaspard's important researches on putrid diseases, which we shall detail in our next Number; continuation of M. Oudet's paper on the teeth; and M. Demoulins on the use of the colours in the choroid coat of the eye. M. Oudet tries to prove from an extensive examination of the teeth of vertebrated animals, and particularly of rabbits

"That—similar to corneous productions as to the organic actions which precede and accompany their formation, or preside over their growth—the teeth are to the mucous system, what the horns, the hair, and the nails are to the cutaneous system.

These consequences, therefore, of his experiments, ought, M. Oudet thinks, to be regarded as the completion and experimental demonstration of the theory of dentition, given by John Hunter, and adopted by M. Cuvier.

Among other curious observations in M. Demoulins' paper, he has proved the fact already announced by MM. Magendie and Blondel, that the mole has no optic nerve, by proving it to be destitute of the foramen in the sphenoid, through which it should pass: some other animals likewise want this. His great aim, however, is to show that both as regards Nyctylopes and Hemeralopes, the choroid, is by means of colour, endowed with more or less of a reflecting power, according as the wants of the animal require it. This paper is evidently a continuation of

Demoulins' *Memoir on the Surfaces of the Retina* †.—The folds of the optic nerve were not found to be necessarily coincident with that of the retina. His most important proposition, however, supported by many facts, is that there is a constant

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* Journal de Physiologie Expérimentale et Pathologique. Par F. Magendie, &c. Tome iv. No. 1.

† Memoire sur le Rapport qu'a l'Etendue des surfaces de la Retine, &c. Par M. A. Demoulins, D.M.P.

coincidence between the degree of energy and extent of vision, and the extent of the surfaces of the retina and optic nerve; and that the same proportional coincidence is found with respect to the volume of the optic lobes, or *tubercula quadrigemina*, at least in birds and fishes. He has also refuted in this Memoir some of the statements of Flourens and Serres.

Lawrance and Coates *on Absorption from the Brain**.—Dr. Coates, of America, has given a brief notice of some experiments made by him conjointly with the late lamented Dr. Lawrance. The following is Dr. Coates's statement:—

"That absorption takes place in the brain has often been inferred from the effects of disease and from analogy. This has lately been much strengthened by those observations which go to prove that the veins perform this function. The fact has, however, been often denied, and we know of no positive or experimental proof of it. Since learning the advantage afforded in investigations of this nature, by the use of prussiate of potass, we thought it might assist in ascertaining this point, and we accordingly now have direct evidence of absorption from the contents of the pia mater.

"About a drachm of the saturated solution of prussiate of potass was injected into the brain of a half grown kitten; the operation was followed by immediate apoplexy. In a short time, the salt was discoverable in the serum of the blood of the right side of the heart, as well as in several other parts of the body. In one experiment, the trials were not made for four or five hours, the animal having been long dead; and in this case some uncertainty was thought to exist; but in a subsequent one, the fluids, &c., were examined in about an hour, and the results as stated above. It should be borne in mind, that the injected liquor penetrated the ventricles, as well as the lacerated cavity it formed in the brain. I believe the cavity is in the same general predicament with the brain, and has been equally denied to perform absorption."

Dr. J. T. Todd *on the Re-production of Members*†.—The subject of this paper, though not altogether new, is very interesting. The author has the merit of describing the changes consequent on the process, with more minuteness and accuracy than we have before met with them. When a limb is removed from the aquatic salamander, inflammation follows, and a cicatrix is formed as in the other vertebrated animals, but the extremity is enlarged and bulbous. From one to six days after the cicatrix is formed, a red, soft point projects from the centre, whence a glutinous secretion oozes. In a few days more, this point—ascertained by the microscope to be a cluster of blood-vessels—enlarges into a cone, composed of grey semi-transpa-

* Experiments on Absorption from the Brain. By the late Dr. J. O'B. Lawrance and by Dr. B. H. Coates.

† Brande's Journal of Science, No. XXXI.

rent coagulable lymph, and covered by a thin membrane. As this cone elongates—the red point disappears usually in about twelve days. This process goes on thus till the first articulation is completed; when the same process goes on in the formation of the second, and also of the foot and toes. The whole limb, when first formed, is small and feeble, and it is usually twelve months before it is equal to the others. The tail when cut off, grows again to its original size in a much shorter period.—Dr. Todd goes on :—

"From the very interesting experiments of my ingenious friend, Professor San Giovanni, of Naples, I am authorised to conclude, that although the re-productions of the earth-worm present some specific differences, yet the general process is the same. I am entirely indebted to his liberality for the following account of it. When earth-worms are divided at the lower edge of their great ring, if they survive the injury, which they generally do, thrice in twenty times, the separate parts gradually diminish in circumference, the wounds cicatrize, and the cicatrix, which is of a bright red colour, is surrounded by a round projecting band (bourrelet.) In the anterior half, re-production goes on rapidly; for in twenty-four days from the beginning of the experiment, four or six of its rings are already re-produced, in all about four or five lines in length. As soon as the re-production commences, the round projecting band ceases to be observed. The new production is transparent, of a clear reddish colour, and of the same size and diameter as the rest of the body. The anus is perfectly formed, and the parts of vessels, nerves, and alimentary canal, belonging to the new growth, can be observed, as well as the lateral filaments distributed by pairs to each of the new rings. The great ring, it is worthy of remark, entirely disappears during its re-production. The process continues to proceed in the same manner, though with less rapidity, being apparently much influenced by the season of the year. Two hundred and thirteen days from the commencement of the experiment, the anterior halves have each re-produced 25 or 26 rings, the new growth becoming gradually redder, less transparent, and more perfectly organized. Their diameter is every where equal, as well in the new part as in the old; so that the new tail continues conical, instead of being flattened as in the original.

"The process of re-production is much slower in the posterior halves. They preserve a healthy and well nourished appearance, their anterior extremity cicatrizes and tapers very much, becoming more so until fifty-five days from the beginning of the experiment, and the new growth be distinctly perceived, when only three or four new rings are observed at the anterior extremity, their termination, the seat of the head assuming a pointed conical form, approaching nearer that of the natural head. Two hundred and thirteen days from the beginning of the experiment, the posterior halves have each re-produced five or six rings, and the head, in appearance, (for if it does not appear that its real organization was deter-

mined by dissection (only differing from the natural one in being more obtuse and less tapered. Thus, from the division of these worms, Professor San Giovanni obtained six perfect ones, which he submitted to the inspection of the Royal Academy of Naples, in May 1815."

M. Breschet's *Experiments on Digestion* *.—These experiments are like several of the recent American ones, less original than confirmative of others. We cannot indeed have too many proofs of interesting facts which require much research, and these go to confirm many of the experiments of Le Gallois, W. Phillip, and Brodie, respecting the influence of the nerves in digestion. The experiments themselves, being so very analogous to those already known we shall not detail, but shall merely state the conclusions resulting from them.

1. "The simple section of the pneumonic gastric nerves in the neck, without loss of substance, and without altering the position of their extremities, does not prevent digestion from being performed; it only retards it in a very evident manner.

2. "The division of these nerves, with a loss of their substance, considerably diminishes the digestive actions of the stomach, but does not appear entirely to abolish it.

3. "The division or destruction of the lower part of the spinal marrow, or the removal of a portion of the brain, is productive of the same effects as to the alterations which food undergoes in the stomach.

4. "Narcotics, administered in such a manner as to produce coma, equally diminished the digestive power.

5. "Every thing that diminishes the sum of the nervous influence transmitted to the stomach, impedes digestion.

6. "When digestion is completely suspended by the section of these nerves with loss of substance, that action may be re-established by means of galvanism, and the food contained in the stomach converted into chyme, with almost as much rapidity, and to all appearance as completely, as under ordinary circumstances."

Phrenology.—This pseudo-science is making, we observe, some progress in the work of proselytizing; and, as no scientific Journal would admit their nonsense, some money has been lately expended in publishing Transactions—a Journal—and other organs of phrenological intelligence. These, like the thing itself, are the most incomprehensible maze of absurdities we ever perused. Even were the inquiry a sober matter-of-fact concern—as it most surely is not—it must soon come to ruin under the hands of its present mad-cap advocates. We allow the inventors of the system great merit as anatomists and dissectors of the brain, but as moralists and dictators on the dispositions of individuals, they are, we conceive, low indeed, and must be so while they continue to pursue

* De l'Influence du Systéme Nerveux sur la Digestion. Par MM. Breschet, Edwards, et Vavasseur. Mémoire lu à la Societé Philomatique.

this absurd and visionary system, which has been refuted and re-refuted a hundred times; but, like a person of confirmed obstinacy, refutations are passed by as nothing—and the old absurdities are persisted in, as if they were invulnerable. It would be wasting the time of our readers and the space of our pages, to bestow another word on Phrenology as it now stands.

MM. Prevost and Dumas *on the Urinary Secretions.* — The Swiss physiologists are directing their researches into all parts of the animal economy, as will be seen from our former records of their experiments. The basis of healthy urine is the chemical substance called urea, but there are usually about thirty different substances in it besides. As rabbits do not bear extirpation of the kidneys well, our authors selected dogs and cats. One kidney was first removed, and in about a fortnight afterwards, when the wound was healed, the other. The first operation has little effect on the health; but in three days after the second operation, there are copious liquid brown stools, and vomiting of similar matter, rapid small pulse, great constitutional disturbance, and laborious respiration, which, in from five to nine days, terminates in death.

"*Dissection.*—In the ventricles of the brain are effusions of limpid serum; the bronchia filled with mucus; inflamed liver; strong contraction of the urinary bladder; and the intestines replete with liquid fæces.

"They calculated that a healthy dog, before the operation, produces about a drachm of *urea* daily; after the operation, five ounces of blood were found to contain a scruple of *urea.* They are led to agree with the opinion, that the *urea* exists previously in the blood, and that, as it is formed in the blood, it is separated from it in the kidney by elimination. They have not yet ascertained where the urea originates.

MM. Prevost and Dumas *on Muscular Contraction**. — In a state of rest, the muscles have their fibres parallel and united into fasciculi by cellular texture. But when excited to contract, by a galvanic current, the fibres, if placed under a microscope, and sufficiently transparent, are instantly seen to be thrown into a zig-zag form, though there is no difference of bulk thence produced. The elementary nervous fibres they found to traverse the muscular fibres always at right angles. Now, by a galvanic current traversing the nervous filaments, which are good conductors, and well insolated in fat, the above phenomenon is thought to be explicable, as they will, according to a known law, approach one another, carry with them the attached muscular fibres, and cause the above contraction and the consequeut shortening of the muscle.

III. PATHOLOGY.

The rapid increase of contributions in this department, renders it very difficult to do it justice in the narrow limits

* Archives Gènèrales de Mèdecine.

of this sketch; but we shall exert ourselves to let nothing of moment escape us, and when we cannot spare room under this division, we shall introduce more extended papers in the body of our Journal. This we shall do with an interesting paper now before us, by M. Boyle, on Paralysis and Apoplexy, establishing the fact that paralysis may exist in the same side with the cerebral lesion which occasions it.

Dr. SCUDAMORE *on the Blood* *.—The author—already well known for the most elaborate treatise on gout ever published—has, in this Essay, gone into a very extensive inquiry, by experiment, into the changes produced on the blood by disease. The experiments detailed are about one hundred, and the conclusions from them seem to possess interest. We shall reserve for our next Number a more minute account of it. We may, in the mean time, remark, however, that Dr. Scudamore, while he is in general a *solidist*, contends

"That we ought, both theoretically and practically, to have some regard to the tenets of the *humoral pathology*; and allow ourselves to reason upon the probable chemical influence of different medical agents on the blood itself."—p. 155.

Dr. COPELAND *on Cerebral Excitement and Blood-letting*.—We consider the following views of Dr. Copeland as of very great practical importance: on the younger part of the profession, in particular, they cannot be too strongly impressed, nor too often repeated. Cerebral excitement may be consequent upon inflammation, general plethora, or local determination; but it is not necessarily so, according to the prevalent, but erroneous opinion. If we bleed a man, or other animal, frequently, either when in good health, or labouring under cerebral excitement, we shall produce, in proportion to the depletion, symptoms of determination to the brain—delirium—and death, with cerebral derangement up to the latest moment of existence; and, on dissection, the brain will be found gorged with blood, that is, in comparison with any other part of the body. The only exception to this is, where the loss of blood has been so great and sudden as to produce instant death. In profuse uterine hemorrhage, how often is it necessary to watch the patient with the utmost care to prevent mental derangement? Irritative fever almost always supervenes in consequence of the cerebral excitement, and notwithstanding the uterine irritation, which might be supposed to counteract it.

* An Essay on the Blood, comprehending the chief circumstances which influence its coagulation; the nature of the buffy coat; with a concise medical view of the state of the blood in disease, &c. By Charles Scudamore, M.D. F.R.S. &c. 8vo. p. 162. Longman and Co. London, 1824.

Cerebral excitement and local determination are also produced most commonly—independent of depletion—by a low state, or debility of the system; and to those whose health is vigorous, the maxim "ubi irritatio ibi fluxus," seldom applies; and whether the irritation be physical or moral, the observed effects will be proportional to its intensity, and to the state of the system.

M. Striebel *on the Symptoms of Diseases* *.—This useful volume is chiefly directed to the pathological phenomena of Nervous Diseases, and to what the author chooses to call Chorea Rachita. A work of this kind, which is meant chiefly as a text book, is not well suited for extract or analysis.

M. Wendt *on Mesenteric Inflammation* †.—This author, in the last volume of the Transactions of the Royal Society of Medicine of Copenhagen, has given an interesting case of insidious mesenteric inflammation. The patient, a boy of five years old, was left in a weak state from a convulsive cough—when suddenly he complained of pains in his limbs. Next day he was seized with vomiting, great redness of the eyes, and stupid expression of countenance. The pulse and tongue were natural. His manner was languid, and occasionally delirious. The abdomen was neither swelled, nor painful on pressure—but he complained of pain in his lungs. He sunk into a typhoid state, and expired on the fifth day.

Dissection.—The portion of the mesentery, connected with the whole length of the jejunum, was inflamed, extending more widely along the back, but not affecting the intestine.—Three dissections are mentioned by M. Wendt, in which ulcerated openings were discovered in the mesentery, discharging pus copiously. He believes such cases not to be uncommon.

"M. Andral, junior's *Case of Aneurism of the Aorta opening into the Trachea* ‡.—Our author presented to the Academy of Medicine a case of this description. It was remarkable, inasmuch as there was not any sac, strictly speaking, but only an augmented capacity of the artery, admitting the introduction of the fist, and, at the same time, a great thickening of its parietes. The perforation of the vessel appeared to have taken place by a sort of ulceration of its coats. During life, the disease had presented no other sign than an indefinable rustling at the top of the sternum, without actual pulsation. There existed, also, considerable emphysema of one of the lungs, which M. Andral had recognized from the symp-

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* Beitrage Heilwissenschaft. Von S. Striebel. 8vo., Francfurt. 1823.

† Acta Regiæ Societatis Medicæ Hafniensis, vol. vi. Hafniæ. 1821.

‡ Un Anévrysme de l'Aorte ouvert dans la Trachée artére. Par M. Andral, fils.

toms indicated by M. Laennec, viz., the absence of respiration on the affected side, together with the existence of great sonorousness."

*Leprosy of Norway**.—It is no uncommon thing to refer cutaneous affections to the eating of dried or salted fish. It is from a different cause that a sort of leprosy—having some affinity, perhaps, to sea scurvy—is endemic in Bothnia, Finland, Œland, and Gothland. Dr. Martin traces it to fish infected with this complaint, and says he has repeatedly observed fish diseased in this way. The symptoms of the disease are, emaciation and a cachectic look, followed by tumours, which sometimes suppurate, and are sometimes filled with blood or sanies. When these ulcerate, the glands put on a leaden hue, and the skin becomes scaly and wrinkled. As the disease advances, the whole glands of the body become engorged; the feet œdematous; the eye-brows are depilated; and the eye-lids, lips, and palate are pale. In the last stage the nostrils are obstructed, while the glands about the nose and lips pour out blood and sanies. It sometimes continues for twelve or fourteen years before it reach the last stage.

Syphilitic Inoculation†.—Following the theory that there is no such thing as any specific virus, three students of medicine at Paris undertook to prove the truth of it. Accordingly, they inoculated themselves with matter from venereal sores, by means of lancet punctures in the arm, as in vaccination. In one of the cases, the operation was followed by enlargement of the glands of the axilla, and was treated as a simple inflammation, in conformity to the theory; but, in spite of this, the swelling went on—suppurated—destroyed part of the substance of the axilla—and the ulcer is still open. In another of the cases, the puncture became inflamed and ulcerated; a chancre formed, with all the usual characters of a venereal sore; and was treated, as the preceding case, on the supposition that it was simple inflammation. The ulcer spread in an alarming manner; the patient consulted an eminent practitioner, and, on being informed that it was genuine syphilis, and that he must undergo a mercurial course, the infatuated youth opened the crural artery, and put an end to his existence.—This, we think, ought to deter others from such rash experiments.

Phthisis incompatable with Intermittent.—It was long ago remarked, that in the countries which are most liable to intermittents, phthisis is comparatively rare. Holland, Flanders,

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* Sur la Lépre de Norwége; poisson lépreux. Ann. marit.

† Inoculation Syphilitique. Bulletin des Sciences Medicales.

and some counties in England, were quoted as instances. We observe, that the American physicians have added strength to the opinion, by extensive observations in the districts where intermittent prevails.

Dr. Davy *on the Absorption of Gases.*—In consequence of certain phenomena which occurred in a case of pneumo-thorax, Dr. Davy was led to try, by experiment, the power of internal membranes to absorb gas.

"Atmospheric air was injected into the pleura of a dog, and the opening through the parietes of the chest closed by suture: at the end of forty-eight hours the animal was killed. An hour after, the pleura was opened, and about eight cubic inches of air were collected, which showed slight traces of carbonic acid gas, and consisted of ninety-three of oxygen, and seven of azotic gas, in the hundred. The result, then, of this experiment, (says Doctor Davy,) seems to show, that the oxygen was absorbed in a greater proportion than the azote, and thus tends to account for the accumulations of the latter gas in the preceding case. With regard to the carbonic acid gas, it is conceived to have been formed in the lungs as in the ordinary respiration, and mixing with the air inspired, was thus received into the pleura: if so, it would seem to prove that this gas was less readily absorbed by the pleura, than oxygen."

"The result justifies the opinion of the author, that the carbonic acid gas was not formed by secretion from the pleura, but, on the contrary, it would appear that this membrane has the property of absorbing gases, exhibiting a preference for one another; and the discovery of this circumstance led Dr. Davy to pursue the subject farther.

"The obvious results of these two experiments in the same dog, are, 1st, the absorption of the greater part of the carbonic acid gas, and the whole of the hydrogen, introduced into the pleura, and the appearance *de novo*, of a considerable quantity of azote: 2dly, the death of the animal in the space of five hours from the time of admission of the nitrous gas and azote into the opposite pleura; the absorptions of the greater part of the former gas, without inflammation of the membrane, with which it was immediately in contact; and the production of a peculiar change in the blood."

M. Itard *on Cerebral Inflammation* *.—The obscurity which hangs over the history of malignant intermittents is well known. M. Itard has endeavoured to remove this: and refers for the cause of obstinate intermittents very liable to return, to some latent chronic inflammation. There are few practitioners, who have not seen latent inflammations of the pleura, or of the lungs—before taking the character of pulmonary phthisis—concealing themselves under the mask of intermittent fever. It is a still more

* Mémoire sur quelque Phlegmasies Cérebrales, &c. Par. M. Itard, &c.

remarkable occurrence to see inflammations of the less important organs, such as the ureters, excited either by a morbid stimulus, as in gonorrhœa, or by the application of caustic bougies—produce violent attacks of intermittent fever. M. Itard, led by this analogy, examined the state of the brain and its membranes in malignant intermittents accompanied by cerebral disturbance, such as sopor, delirium, convulsions, cephalalgia, &c., and did certainly discover marks of inflammation. We are more disposed, however, to consider these and other inflammatory appearances, *post mortem*—as the consequence, rather than as the cause of the disease.

Dr. Bluhm *on the Russian Constitution**.—In the Medical Memoirs, published at St. Petersburg, Dr. Bluhm has undertaken the now unfashionable investigation of the climate, and constitution of the people of that city. It was in such observations of years and constitutions that the great physicians of former times, from Hippocrates to Sydenham, excelled; but they are now consigned to the popular and unscientific pages of such works as the Monthly Literary Magazines, and considered to be of no moment in medical inquiry. We hope that the profession will come to see their own interest in inquiries similar to that of Dr. Bluhm's, whose labours however, we are sorry to see, have not been very successful.

M. Roux *on Spontaneous Perforations of the Stomach*†.—From the time that M. Chaussier called the attention of pathologists to spontaneous perforations of the stomach, many authors, and chiefly MM. Gérard and Laisné, have given remarkable cases in illustration of the occurrence. M. Cruveilhier has also more recently elucidated the subject by dissection, and our countryman Dr. Gairdner, as we have already seen in this Number page 174, has written a very excellent paper on the subject. M. Roux thinks that such erosions are the operation of a long continued inflammation of the mucous membrane. He distinguishes two stages of the complaint:—one occurring chiefly in children, in which there is a gelatinous softening of the parts affected, and which may be either acute or chronic; the other, occurring in adult age, in which the perforations arise from ulcerative inflammation. The author recommends the warm bath, and opium with mucilage (L'opium gommeux), as the only remedies; but does not say that they have been successful.

Strambio *on the Pathology of the Pellagra*.—In a newly

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* Vermischte Abhandlungen aus dem Gebiete des Heilkunde. St. Petersburg, 1821.

† Quelques Considerations sur les Perforations Spontanées de L' Estomac. Par. M. X. Roux. 8vo. Paris, 1823.

commenced Italian Journal *, of which the first Number is now before us, the Editor professes himself a disciple of Broussais. Indeed the whole journal is taken up with a translation of the principles of Broussais in the aphoristic style, and with a dissertation on pellagra. Our readers are aware that this is a disease peculiar to Italy, and characterised by tubercles chiefly on the body and limbs, sometimes desquamating; great tension of the skin; vertigo; burning, lancinating pain in the head; melancholy, at first remitting, afterwards fixed, and terminating in alienation of mind, which often leads to suicide. The disease usually terminates in diarrhœa, atrophy, and dropsy. The older writers make the disease idiopathic to the skin. M. Jourdan, in the Dictionnaire des Sciences Médicales, first referred it to an inflammation of the internal mucous membranes, making the external symptoms only symptomatic. This doctrine, Dr. Strambio, in reviewing his father's works on the disease †, supports with greater zeal than science; as we do not remark, how much soever he may talk about morbid dissection and its importance, that he has adduced a single fact before unknown; or given a single dissection in support of his pathology. Nothing, indeed, could more strongly demonstrate the low state of medical science in Italy, than this tedious talkative journal of Strambio's.

Dr. Prichard's *Pathology of Paralysis, Epilepsy, and Chorea* ‡.—The learned author gives several good cases, illustrative of the pathology which deduces paralysis chiefly from affections of the spinal marrow. On dissecting several patients, Dr. Prichard found, as M. Esquirol had done, that the membranes of the spinal canal were strongly injected, indicating the presence of inflammation. In some of the cases effusion had taken place, both in the brain and in the theca vertebralis. The practice which Dr. Prichard recommends as founded on this pathology, consists of blisters and issues along the course of the spine—of course after proper depletion—and internally the oil of turpentine, in doses of one, two, or three drachms a day.

Dr. Sachero, *of Turin, on the Organic Pulse* §.—This work is a very elaborate investigation of the different states of the pulse in health and disease, with, what to us at least is a novelty, plates, exhibiting the various elevations of the artery, at the

* Annali della Medicina fisiologico-patologica. Compilati da Giovanni Strambio, D.M. Milano, Gennaio, 1824.

† De Pellagra. Cajetani Strambio, M.D, and Dissertazioni di Gaetano Strambio Sulla Pellagra.

‡ Medical Repository.

§ De pulsibus organicis diagnosticis et prognosticis, nec non, de eorum insigni utilitate in morborum therapeia derigenda specimen cum iconibus. Auctore H. Sachero, Med. D. pp. 262. 8vo. Augusti Taurinorum, 1823.

point where it is felt by the finger, all of which varieties of pulse he has distinguished by the old nomenclature, namely, the cephalic, guttural, pectoral, cordal, stomachal, hepatic, splenic, intestinal, ascital, hemorrhoidal, uterine, gravidic, and cutaneal. As there seem to be some useful things in the work, mingled with much theory, we shall endeavour, in a subsequent Number, to separate the wheat from the chaff.

IV. MORBID DISSECTIONS.

We have more need than ever, in the present rage for morbid dissection, to caution our younger readers not to be drawn away by the influence of fashion from observing symptoms, and noting the effects of remedies; and above all, not to be led by fancy to conclude that every morbid lesion found on dissection has been the *only* cause of such symptoms, if indeed it has been any cause of them at all, and not merely a consequence of the disease. The study of morbid anatomy is highly useful in its proper place; but it is very seductive and dangerous to the young practitioner. Morgagni, and Baillie, and more recently, the French school of Laennec and Broussais, have done much that is useful; but that is no reason why we should neglect the profound observations of Sydenham, Heberden, and J. P. Frank; or try to turn the practice of physic into a mechanical art. As Journalists, we at present stand alone in this, but we will not swerve from what we think to be our duty, for the sake of a brief fit of fashion.

M. Broussais' *Case of Cancer in the Stomach* *.—The illustrious founder of the school of Val de Grace, has here given us an interesting case of an officer who had had diarrhœa for six months. His temperament was leuco-phlegmatic; he was pale, thin, and had cold extremities; and the epigastric region was tumefied. A feculent diet did some good, but constipation, abdominal meteorismus, frequent pulse, and hot skin supervened, and he sunk.

"*Dissection.*—On opening the body much water was found, while the stomach, the gastro-hepatic omentum, the pancreas, the commencement of the duodenum, the subjacent cellular tissue, and the vena porta, were united in one mass. The cavity of the stomach filled with black blood, presented towards the pylorus a carcinomatous affection of four inches in diameter, whose ulcerated centre presented a perforation, leading to and entering the vena porta, whence, without doubt, the mass of blood had proceeded."

M. Andral's *Cases of Diaphragmatic Pleuritis* †.—Though

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* Sur un Cancer de l'Estomac avec perforation de la veine porte. Par M. Casimir Broussais.

† Archives Générales de Médecine. Oct.

the precise point where an inflammation exists is not so practically important as the ascertaining of the inflammation itself; yet, for the sake of precision, where it can be done it ought. M. Andral, jun., a zealous partizan of the anatomical theory of diseases, here gives us several cases of this disease both simple and complicated. We shall content ourselves with his two simple cases.

1st Case.—A man, aged 26, was seized with febrile symptoms, oppression, and pain in the left hypochondrium, with some hiccup, dyspnœa, and frequent cough. The hypochondrium was tender to the touch. He died on the sixth day, evidently by the sheer neglect of the physician, who only prescribed venesection to twelve ounces and twenty leeches to the hypochondrium.

"*Dissection.*—The pleura of the diaphragm on the left side and that covering the basis of the left lung opposite to it, showed strong appearances of inflammation, being fully injected with blood and covered with a mass of albuminous exudation, which filled up the space between the lung and the diaphragm. This, therefore, was the seat of the disease, as both the substance of the lungs and diaphragm, and also the other parts of the pleura were healthy. No morbid appearance occurred in the heart, brain, or abdomen."

2d Case.—A man, aged 31, a tailor, was seized after exposure to wet, with acute pain at the pit of the stomach; and after some days it extended towards the right hypochondrium, became tender on pressure, and was accompanied with cough, dyspnœa, nausea, vomiting, and hiccup. As in the former case, a trifling quantity of blood was taken by the lancet and leeches, and, *of course*, the patient died.

"*Dissection.*—As in the former case, between the diaphragmatic and pneumonic portions of the pleura, there was a considerable exudation of sero-purulent matter, which was confined by membranous adhesions between the lungs and diaphragm. This effusion was so great as to displace both the liver and the right lung. All the other parts of the pleura were sound, as were the heart and the viscera of the abdomen. The arachnoid membrane, however, was injected, and the lungs were studded with miliary granulations."

M. Gaugiran's *Case of Cerebral Fungus* *.—This is a very valuable and instructive case for teaching caution. A man, aged 24, was seized all at once with giddiness and sense of oppression, and tightness about the chest, followed some days after by vomiting, but no pain in the head, or other cerebral affection besides the vertigo, till the day of his death, when an excruciating pain in the occiput commenced and continued till he expired.

* Journal Générale de Médecine.

"*Dissection.*—The body was opened in presence of MM. Delpech, Gaugiran, and Naudin. In the brain were found five fungous vegetations, springing from the superior part of the dura mater, and they had even worn fossæ in the opposite parietal bone. The dura mater adhered morbidly to the arachnoid on the upper and anterior part of both hemispheres. On the superior part of the falciform process, there were signs of an incipient ossification. In the left lateral ventricle were found six or seven ounces of serum; and in the right four or five. The vessels and sinuses of the brain were highly inflamed, as were a few points of the stomach. The liver was gorged with blood."

V. SURGERY.

We have no very distinguished works to record in this department, if we except the continuation of Sabatier's Médecine Operatoire, the fourth volume of which we have just received, and shall probably review in our next Number. In America, a young lecturer has published the first part of a very clever system of surgical anatomy*, with the drawback of very bad writing and literary negligence. We shall give the following specimen of his directions.

Ligature of the Aorta. By W. Anderson, of New York.

"I would commence an incision, beginning over the extremity of the last or twelfth rib of the left side, and continue it through the common integuments as far as the anterior superior spinous process of the ilium. Thus I would lay bare the external oblique muscle, which I would divide for the same extent; this incision would be almost in the course of its fibres. The internal oblique and transversalis muscles I would also divide in the line to the extent of the first incision. These muscles readily retracting, would expose the fascia transversalis, which part I would lift with a pair of dissecting forceps, and open it as directed in the case of a hernial sac. I would then introduce my finger, and extend its division by means of a bistoury as far as the first cut through the common integuments, being cautious to avoid any injury to the peritoneum underneath. I would, after this, elevate the peritoneum from the posterior abdominal parietes, by insinuating two fingers, while I supported with the other hand the part raised, until I had separated as far as the attachment of the mesentery, in the forepart of the lumber spine. I should now see and feel the artery above its bifurcation, and be able, with a properly curved aneurismal needle, to pass a ligature around it, and draw the knot by the contrivance made use of for the extirpation of the tonsils.

"To facilitate such an operation, as remarked in Sir A. Cooper's case, it would be expedient to approximate the shoulders to the

* System of Surgical Anatomy. Part first, &c. with plates. By William Anderson, 4to. p. 199. New York.

pelvis, that the abdominal muscles might be relaxed; and also, previously, to empty the intestinal canal, that no difficulty should be experienced in elevating the peritoneum, from the pressure of the abdominal viscera."—p. 150.

Our author gives us the details of more than one case, in which, on dissection after death, the canal of the aorta has been found obliterated. Reasoning from such facts, it seems clear that the aorta may be tied without any immediate danger to the life of the subject: and in those hopeless cases, where every other resource of art is unavailing, we can perceive no one sound or even plausible reason that can be urged against its performance.

Macilwain's *Treatise on Strictures**.—A complete work like this was much wanted to condense into one volume the multiform doctrines and practice of the various writers on strictures; all of whom only detail their own views and pass by others as quite worthless. The author, however, is far from being a mere compiler; he reasons well, and is often original. We shall review the work in our next Number.

New Operation for Cataract. By John Bowen, M.D. †.—The author of this work discards at one sweep the various distinctions of Cataract into soft, hard, &c. and all the various modes of couching, extraction, and breaking down. He depends solely on his favourite operation of Hyalonyxis, which he has performed, he says, no less than 160 times with unexampled success, the proportion of failures being about one in thirty, and no secondary cataract or even inflammation so as to require the lancet. This is certainly an improvement of no common magnitude, if it prove as successful in the hands of others as it has done with Dr. Bowen. We shall therefore give his details at some length in our succeeding Number.

Lisfranc's *New Diagnosis of Fractures* ‡.—This celebrated surgeon, already well known to our readers, has here furnished us with a very useful method of distinguishing fractures with infinitely less pain to the patient than any of the old methods furnish. It is, in a word, the application of Laennec's stethoscope to such cases; an instrument, which, to the great loss of

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* A Treatise on Stricture of the Urethra; designed as a Manual for the Treatment of that Complaint, and addressed chiefly to Junior Practitioners. By George Macilwain, M.R.C. Surgeon to the Finsbury Dispensary, &c. pp. 138. 8vo. London—Anderson, 1824.

† Practical Observations on the removal of every species and variety of Cataract, by Hyalonyxis or the vitreous operation, &c. By John Bowen, M.D. p.p. 120, 8vo. with a plate. London, Callow, 1824.

‡ Mémoire sur de Nouvelles Applications du Stéthoscope de M. le Professeur Laennec. Par J. Lisfranc, pp. 30. 8vo. Paris, 1823.

hundreds of patients, is scarcely known in England moen than by name. We shall soon take an opportunity of calling attention to its great utility in the diagnosis of pectoral complaints; in the mean time we shall give a specimen of Lisfranc's new application of it.

"The experiments which I have made upon the dead body, and afterwards repeated upon the living subject, both in my private practice and at the "Bureau Central," do not permit me to hesitate in laying down the principle, that there can be no more a doubtful fracture, excepting some solutions of continuity of the bones of the cranium. In fact, by the assistance of the stethoscope the tumefaction is never sufficiently considerable to conceal the crepitation, and the slightest movements are sufficient to render it perceptible. Our patients will, therefore, no longer be exposed to those errors, so dangerous in the diagnosis of fractures; and we shall have the satisfaction of preventing those violent pains, which are the inevitable consequence of the present mode of investigation.

"*General Rules for the application of the Stethoscope.*

1. When the stethoscope is applied upon a fracture, it is almost indifferent whether the mouth-piece be left in it or not; but in proportion as we recede from it the crepitation becomes more sensible, if the instrument be deprived of the mouth-piece.

2. The more superficial the bones are, the more the crepitation is distinct, and as the slightest movements are sufficient to produce it, it is the most sensible upon the fracture. Thus we not only determine the fact of the fracture, but also its precise seat. It would be useless to remark how much we thus avoid those painful examinations, and how important it is in practice to know the precise situation of the solution of continuity in the bone. To discover this situation with accuracy, it is indispensable that the movements impressed upon the fragments should be always the same.

3. The crepitation is less appreciable in proportion as we recede from the fractured point, but it is heard at almost inconceivable distances; in that case, however, it must be rather strong.

4. When a fracture exists with crossing of the part (chevauchement), the crepitation is less easy to be distinguished; but if an unexercised ear do not perceive it very easily, it may be rendered much more distinct by practising slight extension and counter extension.

5. The crepitation occasioned by fragments of compact bones produces an acute sound, with loud crackling (des forts petillemens), perceived by the stethoscope they are often loud, and sometimes considerably offend the ear.

6. The crepitation of fragments of spongy bones is obtuse (sourde), and is similar to the action of a file upon a hard and porous body (the pumice stone for instance), the noise, from time to time, is intermixed with rather stronger sounds, which have a certain analogy with the crepitation of compact bones.

7. The crepitation of oblique fractures is stronger than that of transverse fractures.

8. If a liquid be effused round the fragments, there is joined to the crepitation a noise, similar to that which the foot produces in a bad shoe containing water.

9. When the fracture is complicated with splinters, there is heard, besides the ordinary crepitation, a sort of crackling, similar to that which many hard and angular bodies would produce when rubbed against each other.

10. When the fracture is accompanied by wounds of the soft parts, to the crepitation are joined sounds similar to those produced by strong inspirations and expirations, when the mouth is widely open.

11. Luxations cannot be confounded with fractures, for the sensation produced by the displaced articular surfaces is slight, and hardly extends beyond the situation of displacement: it is obtuse, like that of two polished and humid surfaces moved upon each other.

12. The movement of tendons in their sheaths produces sounds, full, obtuse, jerking, rather thin (rares), and extremely different from crepitation.

We shall not terminate these generalities without recommending even to those who are accustomed to the use of the stethoscope, to occasionally exercise themselves to the sound of crepitation upon the dead body; for if we judge by ourselves, and MM. Ricard, Zieglar, Michel, Van Mons, Accarie, and Gosteat, who have assisted us in our researches, our first essays furnished us but very obscure sensations.

"*Fractures of the Tibia.*—The pathologists agree that fractures of the tibia are often very difficult to appreciate, particularly when the patient has been able to walk; the pain, which continues beyond the usual time, *the impalement* which takes place upon some joint of the bone, the shocks which the patient experiences during sleep, are but equivocal signs; often the tumefaction prevents the osseous inequalities from being discovered, which indeed sometimes do not exist at all. The same may be said of the mobility of the fragments; if the crepitation takes place it is obscure, particularly to ordinary practitioners. Let the stethoscope be applied, and impress the slightest movements upon the fragments, and every difficulty disappears. Crepitation, although but little sensible at the posterior part of the leg, is heard along the whole length of the thigh, on the crista iliaca, on the sacrum, and half up the spine: but it is more distinct as we approach the fractured part. If the instrument be placed upon the point of the fibula, diametrically opposed to the fracture, the noise of the crepitation is less than in the whole extent of the tibia, it is less by one half than upon the fracture itself.

Fractures of the Fibula.—Inferior third. When the tumefaction is considerable, the luxation of the foot within is the only sign which allows us to presume the fracture of the fibula; I say presume, since even though after the reduction, the foot should enjoy a greet

mobility, and should be dislocated spontaneously, one would not have the proof of the existence of a fracture, since the rupture of the ligaments might permit of this extraordinary mobility, and yet nothing is more common than to see a simple luxation of the foot reproduce itself spontaneously. If it be objected that it is perfectly indifferent to establish the diagnostic of a fracture, during tumefaction, we would reply, 1. That in pathology it is best to determine a disease upon the spot. 2. That the inflammatory and œdematous swelling disappears by reduction. At all events, it will be admitted that it is extremely rare to obtain a crepitation in the present case. If slight pressure be exercised along the course of the fragments, and recourse is had to the stethoscope, the crepitation is extremely distinct upon the seat of the fracture, it is less upon the middle part of the bone than upon its head, because of the presence of the muscles, which cover the body of the fibula; for the same reason, it is more appreciable upon the crista iliaca than upon the thigh. When the instrument is applied upon the point of the tibia, corresponding to the fracture of the fibula, a distant crepitation is heard, and when it is placed upon the tibia, higher or lower than the fracture of the fibula, a very obscure sensation is obtained.

"*Middle Part.*—At this height the fracture is more difficult to distinguish, since the bone is more deeply seated and the displacement is less; after having advised the impression of movements on the fragments, authors add, that a mistake may be committed: it may be always avoided by the stethoscope; the crepitation will be better appreciated upon the fracture than upon the head of the fibula, or upon the head of the external malleolus.

"*Fractures of the Leg.*—Sensations from multiplied surfaces rubbing against each other, sound equally sensible within and without the leg, and are perceived, very distinctly, as high as the middle of the vertebral column, but diminishing in proportion as we recede from the fracture. It is evident, after the facts we have just established, that the fracture of the fibula may be easily distinguished from that of the tibia, and the fracture of the leg from that of each of these bones in particular.

"*Longitudinal Fracture of the Patella.*—This is so difficult to determine, that authors have almost omitted to mention its signs. The slight separation of fragments, of which Lamotte speaks, is impossible to distinguish if there be any tumefaction. It is also very difficult to impress movements sufficient to appreciate the crepitation and unusual movement of the parts of a broken bone—all these researches are also dangerous, from the development of inflammation which might occur. The stethoscope removes, in an instant, all doubt; the slightest movements suffice to produce a sensation of creeping (fourmillement), most sensible on the fractured part, and perceptible, after the rules established, up to the crista iliaca.

"*Transverse and Oblique Fracture of the Patella.*—1. A prudent surgeon will never permit the patient to walk in order to determine

this fracture, for it would produce the serious inconvenience of tearing the aponeurotic and fibrous layer, if it had resisted the fracturing cause, or the action of the muscles.—2. The commemorative signs can never serve as the basis of a sure diagnosis.—3. We proscribe, from the above reasons, all movement or flexion of the wounded leg.—4. When the swelling of the soft parts exists, the interval established between the fragments is no longer perceptible, although it be considerable.—5. To hear or feel the crepitation, much pain would be occasioned, the bones would be moved considerably, which not only would renew the inflammation, but fresh tearing would be produced.—By the stethoscope all these dangers will be avoided; the slightest motion produces, distinctly, the ordinary crepitation of spongy bones. The limb ought always to be placed in a state of extension, and when there is a considerable separation of the fractured portions, their contiguity ought to be effected.—Do not let us omit to say, that in fractures of the patella, there is joined to the crepitation the sensation produced by the rubbing together of articular surfaces.

"*Fractures of the Femur.*—For the most part, this accident is easily distinguishable; but to determine it by the ordinary means, much more pain is occasioned than by employing the cylinder. Applied upon the fracture, it is always better heard there than elsewhere. It is sensible in the whole extent of the limb, upon the crista iliaca, upon the abdomen, upon the spine, and even upon the sinciput; it may be perceived upon the thorax, while to the sound of respiration are added, deep, obtuse, distant sounds, similar to those heard at a distance from a deep cavern.

"*Fractures of the Neck of the Femur.*—In a great number of cases the diagnosis of this fracture is so difficult to establish, that, although we have the luminous description of it by MM. Boyer and Richerand, there is no disease, I believe, which has so often occasioned mistakes. The shortening of the limb, indeed, and the ascent of the great trochanter do not always exist, or are so slight as to be very difficult to determine. To arrive at the diagnosis more easily, we have long since advised the admeasurement of the respective lengths of the lower extremities by a string, which should extend from the anterior superior spinous process of the ilium to the external malleolus.—There are subjects in whom the member has become elongated by imprudent measures, then the oblique fragments form an arch (arc boutent) against each other, or the paralysed muscles allow themselves to be distended, again opening a new source of errors; for, in the first case, it may become very difficult to give to the thigh its ordinary length, or to produce its shortening. The rotation of the foot without is not constant. *(Pare, J. L. Petit, & Desault.)* The power of rendering to the limb its usual length and rectitude, by slight efforts of extension, is a sign which does not always exist.—The small extent of the circle described by the trochanter major, requires extremely painful movements of rotation, and the trifling length of the neck

of the femur may easily impose upon us. The impossibility of bending the thigh upon the pelvis, when the leg is extended, is a symptom which may also produce the contusion of the articulation.—In the Memoirs of the Academy of Surgery the history of a case is given, in which the patient arose and walked to his lodging after the neck of the femur had been fractured. MM. Desault and Laennec have made similar observations. A great number of facts, collected by Louis, Duverney, and Sabatier, prove that the displacement of the fragments does not always take place immediately after the accident. It is not, therefore, surprizing that the greatest surgeons often hesitate in giving their opinion, even after having observed the case during several days. Every doubt vanishes on the application of the instrument invented by M. Laennec. If the slightest movement be given to the limb, the crepitation is perceived; it is as distinct upon the anterior part of the crista iliaca as upon the articulation itself: it is heard remarkably upon the patella, and in the whole length of the leg.—The separation of the epiphysis from the head of the femur, and the depression of the cotyloid cavity, observed by Ludwig, ought to furnish a particular sound; I have no datum upon these facts, but merely mention them to excite the attention of practitioners.

"*Fractures of the Pelvis.*—I have long since observed, that the most certain means of discovering fractures of the pelvis is, by introducing the finger into the rectum or vagina; nevertheless, some of these fractures are very doubtful. Whenever the fragments have a slight mobility, the stethoscope will discover the solution of continuity and its seat.

"*Fractures of the Radius.*—This fracture is not difficult to distinguish at some distance from the wrist; nevertheless, to determine it satisfactorily, it is often necessary to give multiplied, painful, and even dangerous movements to the bone. When, however, it occurs very near the inferior extremity of the radius, it is agreed that its diagnostic is obscure; it becomes more so from the slight projection occasioned by the superior portion of the broken bone upon the dorsal or palmar surface of the fore-arm: the solution of continuity of the bone may then be confounded with the luxation of the wrist, for the pain often prevents the movements of the hand, and even should they be executed, the swelling would render them incomplete, and would not permit us easily to perceive if the styloid process was moveable or not.—The stethoscope has here, also, the advantage of determining the slightest crepitation; it is most sensible upon the fractured spot. If the cylinder be placed upon the ulna, directly opposite to the fractured point of the radius, the sound is less than on any part of the radius. The crepitation may be heard upon the humerus. If the radius only be moved, when fractured, the crepitation is heard; but if, afterwards, the ulna alone be thrown into action, supposing no fracture of it, no crepitation is heard. This rule applies to the

tibia and fibula: nothing, therefore, is easier than to determine a fracture of one of these bones.

"*Fractures of the Fore-arm.*—The stethoscope will here again preserve the patient from the violent pains which the ordinary means of investigation often occasion. The crepitation is most distinct upon the fractured place; as distinct on the outer as the inner side of the member; it may be heard as high as the superior part of the sternum, even upon the head. Like the leg, the crepitation occasions the sensation of multiplied surfaces rubbing against each other. The fracture of the fore-arm is easier to distinguish than that of the radius or ulna, separately."

M. Delpech's *Excision of a large Tumour.*—This case has been much talked of, and is certainly a remarkable one.—A baker of Perpignan, had some preputial excoriations which were considered to be chancres, but they did not yield to mercury, and he enlisted in the *gendarmerie* on the confines of Spain. Riding produced engorgement of the prepuce, which at length ensheathed the whole penis and scrotum. In six years the tumour had advanced till it hung down below his knee.

"The patient was admitted into the chirurgico-clinical department of Montpellier, where Professor Delpech recognized in the tumour the characters of elephantiasis; and having determined that the testicles and the penis were sound, and that there were no other symptoms of the same affection, he conceived the following plan of operation:—1. To make two semicircular flaps with the sound skin on the two sides of the neck of the tumour, each one commencing at the corresponding inguinal ring, and ending before the anus.—2. In the interval of these two flaps to form a third with the sound skin of the anterior portion of the neck of the tumour. 3. To uncover, right and left, the testicular cords; to ascertain if there was any hernia; to follow then the course of the cords in the tumour down to the testicles; to isolate these last with their cords, and to place them upon the abdomen.—4. To slit open from below up, the swollen sheath as far as the glans; then to dissect and denude the penis, and to place it on the abdomen.—5. To take away all the tumour in dissecting the perineum. The operation was accomplished and lasted fifty minutes, and the tumour weighed sixty pounds. The testicles were enveloped in the two lateral flaps, which went to form a new scrotum. The penis was enclosed in the middle flap which formed a new sheath. In six weeks after every thing was cicatrized. The only inconveniences which followed the operation were a deep-seated spasm, relieved by two doses of opium the same day of the operation, and a slight fever the five following days. A small part of the anterior flap perished by gangrene, so that the penis has no prepuce. The scrotum is well formed, and the testicles move freely within it. Professor Delpech was under the necessity of digging down eight or ten inches through the immense mass of fat which formed the tumour, before he discovered

any vestige either of cord or testicle. This was the occasion of considerable detention in the progress of the operation."

M. Beclard's *Extirpation of the Parotid Gland.*—This formidable operation, thought by several eminent surgeons to be impossible, was performed by M. Beclard, with what we may call partial success.

"L. F. Clout, a paper-stainer, was admitted into the Hospital La Pitié, on the 19th of August, 1823, on account of a schirrous ulceration of the parotid gland. This man was aged forty-seven years, of an apparently good constitution, and of a sanguineo-nervous temperament. The disease had commenced eight years before; but, from being long indolent, and comparatively small, it had rapidly increased, and became the seat of lancinating pains: it had lost also its mobility. On admission into the hospital, this cancerous tumour possessed a very considerable elevation. At its superior margin it raised the lobe, and appeared to involve the cartilaginous portions of the auditory canal. It extended downwards more than an inch from the angle of the jaw; backwards it adhered to the sterno-mastoid muscle, and its anterior portion covered a great portion of the masseter. It was ulcerated in two situations, and had but little motion. There was no appearance of cancerous cachexia. The patient desired an operation, and M. Beclard performed it in the following manner:—

"This patient having been placed on his side, the tumour was inclosed by two curved incisions, the one made at the interior and posterior part, the other at the anterior and superior part of its circumference. That part of the tumour placed over the masseter was first dissected off, from before backwards, with sufficient ease. It was next attempted to detach it from below upwards; but a projection of its substance plunged deeply behind and beneath the internal pterigoid. To endeavour to remove this portion of the schirrus at the commencement, with the rest of the tumour, would be to expose the operator to the risk of hemorrhage, which might be difficult to repress during the operation; M. Beclard therefore decided to dissect upwards, by striking the bistoury into the structure of the tumour itself, on a level with the projections, whilst the instrument divided before and behind the cellular tissue, connecting it to the adjoining parts. Half the inferior circumference of the cartilage, contributing to form the auditory canal, which was enveloped in the diseased part of the parotid adjoining, was removed with it in this first dissection. Numerous arteries were tied at this stage of the operation; and M. Beclard continued the extirpation of the rest of the tumour. A portion of the anterior margin and internal surface of the sterno-mastoid, being converted into schirrous substance, was excised with the bistoury. The projection situated behind the jaw was removed in successive slices: nearly the whole scirrhous mass was already dissected away in this manner, when a large jet of arterial blood announced the lesion of the

external carotid, or the division of one of its principal branches. M. Beclard placed the fore-finger of his left hand on the place whence the hemorrhage proceeded, seized the bleeding vessel with his forceps, and passed a needle with a double ligature around it; an assistant tied the vessel above and below the wound in it, which was lateral. The artery was held forwards and outwards, whilst he completed the operation of that part of the tumour which remained in the pit, formed by the ramus of the jaw. One small projection of the tumour, placed before the cervical vertebræ, was only left. On account of its proximity to the internal jugular vein, M. Beclard contented himself with passing two ligatures beneath this part, by means of a needle, and with tying the one at its superior, the other at its inferior extremity.

"The considerable wound which remained after this operation, presented, in its anterior part, the masseter as if dissected, and the labial artery denuded, but not divided; at its posterior part, the mastoid apophysis, and the sterno-mastoid, with its interior and anterior portion removed; internally, the styloid apophysis, the external carotid surrounded with two ligatures, the stylo-hyoide muscle, and the digastric; and the small portion of the tumour which was tied, formed the bottom of the wound, which opened upwards into the meatus auditorius externus. The wound wasd ressed forthwith.

"The extirpated tumour presented schirrous texture, mixed with a small portion of tuberculous matter. It was impossible to distinguish the structure proper to the gland itself.

"No particular occurrence took place during the first days of the treatment. All the right side of the face remained a stranger to any sort of expression, except what was occasioned by the action of the left side, producing some degree of motion in the soft parts of the right. The right eye remained continually open, which, owing to the irritation and dryness of the conjunctiva thus occasioned, gave rise to slight but obstinate ophthalmia. At the period of suppuration of the wound, the patient experienced deafness of the same side, owing either to inflammation having been propagated to the internal membrane of the ear, or to the quantity of the discharge, and swelling of the adjoining parts. The suppuration was going on kindly, and healthy granulations covered the wound, when, on the twelfth day, the patient experienced rigours, followed by heat and fever. Phlegmonous erysipelas attacked the surrounding parts, and was followed with great delirium. General and local bleedings, during the three following days, caused but slight amendment. After this period the erysipelas on the face terminated by desquamation; but an abscess formed deep below the right trapezius muscle. The pulse remained frequent, and the derangement of the mental faculties continued. For several days, the discharge was excessive. A counter-opening was made, and graduated compression was applied, which occasioned adhesion of the parietes of the abscess, the ligature placed on the external carotid, and that part of the tumour which was tied, came away. The wound was approach-

ing to entire cicatrization, the fever subsided, and the strength and appetite returned: but to the preceding delirium succeeded taciturnity, which was only broken by paroxysms of rage; mental alienation had supervened to the febrile delirium.

"Three months after the operation, the wound was closed, unless near the ear, where it had assumed a character denoting a return of the cancer. The patient was still maniacal, and seemed affected with a chronic inflammation of the membranes of the brain. He died three months and three weeks after the operation.

Dissection.—"The external carotid artery was observed to terminate in cellular tissue, resulting from the cicatrization of the wound. There appeared no vestige of the parotid. The internal jugular vein was obliterated at the same height, and seemed to commence anew lower down, by communicating with the superficial branches. The corresponding lateral sinus was not obliterated. Some pus was found in the meatus auditorius externus. The membrane of the tympanum was sound. There was a marked injection of the pia mater, and of the choroid, which was redder than the choroid plexus. A serosity was found in the ventricles, suspending particles similar to those deposited by some red wines *."

M. Weinhold's *Extirpation of the Parotid.*—This is another testimony in favour of this formidable operation. M. Weinhold says he has removed the parotid in three different cases with success. There are three stages, he says, of schirrosity in the gland, the first that of induration; the second confirmed schirrus; and the third open cancer.—In the first stage the gland may be extirpated by the scalpel; in the second, it is better to use ligatures and caustic; in the third no remedy has been hitherto found. The great danger in the operation for extirpating, is wounding the carotid artery, or dividing the par vagum, either of which, would in all probability prove fatal.

Dr. Archer's *Case of Femoral Aneurism, cured by the Spontaneous Rupture of the Sac* †.—We think this a very interesting case. The patient—an Italian raree-show man, aged 61, who had led a very irregular life, though still vigorous, was attacked with jaundice, and at the same time with pain and weakness in the left leg. The jaundice yielded to the usual treatment; but it was found that a true femoral aneurism had formed, which rather increased than diminished, under pressure and cold applications. The operation was deemed inadvisable at first, but as his health appeared to be sinking, it was at last resolved on. On the day fixed for the operation,

"The patient experienced an instantaneous and violent pain in the knee, attended with considerable noise proceeding from the rupture of the tumour. An immediate distention of the whole limb

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* Med. Rep. † American Medical Recorder.

ensued, accompanied with an extensive ecchymosis from the glutei muscles inclusively, down to the knee, giving it a dark livid colour; the tumour had entirely disappeared.—The patient was much debilitated by the extravasation of blood, and complained very considerably of tension of the thigh; his pulse very feeble and his spirits depressed. A compress and bandage were applied tolerably tight over the seat of the former tumour, and the limb bathed with tincture of camphor. This treatment was continued for several days; on the third day the sugillation appeared to be diminished, and the thigh was evidently smaller. The patient's health was improving; and finally, on the 20th day after the rupture, the swelling and ecchymosis had so far subsided, as to permit him to walk about the room, and in a month more, he was enabled to follow his usual avocation."

Dr. Archer thinks that obliteration of the artery might have taken place from a coagulum, and in consequence of low living from the indigence of the patient.

M. Eastner's *Case of Popliteal Aneurism**.—In Transactions of the Royal Medical Society of Copenhagen, already alluded to, we have an account, by M. Eastner, of a successful operation, which was performed just above the point where the pulsations of the crural artery disappeared from the touch, when examined in the groin. The vessel was found and exposed in this place immediately upon the first incision, an advantage not without its value. Two ligatures were employed; but in place of dividing the artery between them, the limb was simply laid so as to relax the parts to the utmost, and this was thought to have answered equally well. After three months, the tumour not having diminished in size, and yet being without pulsation, was opened and evacuated. Considerable oozing of blood from the whole surface followed, which was stopped with lint, and in seven weeks the wound healed.

M. Pipelet *on Acupuncturation in Convulsive Diseases**.—The multiplied experiments lately made with this agent, all tend to establish its great power over many disorders. We think the present is no less important an application of it than has yet been attempted. M. Pipelet has tried the needles to great extent, particularly in the case of a man who had convulsions of the muscles of the abdomen, diaphragm, thorax, neck, and head, in consequence of a fall, in which the ensiform cartilage had been pushed inwards. He had intense pain beneath the last false rib on both sides. On applying the needles all the convulsions ceased, except those of the neck, which

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* Acta Regiæ Societatis Medicæ Hafniensis.

† Journal Complémentaire.

could not by any means be subdued. Sometimes the needles were allowed to remain, with advantage, for four days at once. They are now, at the patient's request, repeated every ten or fifteen days.

Mr. Syme's *Amputation of the Hip Joint* *.—Within a few months this formidable operation has been twice performed in this country—in the case before us, and in another by Sir Astley Cooper. Mr. Syme's patient was a young man, aged 19, who, for several years, had necrosis of the femur, with numerous discharging orifices, and swelling extending up the hip-joint. Mr. Syme was assisted by Mr. Liston and Mr. Evans. He made an incision in a semi-circular direction up along the femur, and round the trochanter major, to the tuberosity of the ischium, so as to form a flap.

"While Mr. Liston covered the numerous cut arteries with his left hand, and compressed the femoral in the groin by means of his right, I gathered together all the mass of undivided parts on the inner side of the thigh with my left hand, and then insulated the neck of the bone, by passing the knife close past its lower surface. I now cut close down along the bone, for some way below the trochanter minor, and, lastly, made my way outwards obliquely, so as to form a good internal flap. Mr. Liston holding aside the flaps, I made a single cut with my long knife upon the head of the bone, which started, with a loud report, from its socket as soon as the abduction was performed. Finally, I passed the knife round the head of the bone, cut the triangular and remaining portion of capsular ligament; and thus completed the operation, which certainly did not occupy, *at the most*, more than a minute.

"I then proceeded without delay to take up the arteries.—As soon as the femoral, which had been completely commanded by pressure in the groin, was secured, Mr. Liston relaxed his hands, in order that we might form some estimate as to the size and number of bleeding vessels; and then, had it not been for thorough seasoning in scenes of dreadful hemorrhage, I certainly should have been startled, prepared as I was to expect unusual vascularity, owing to the extensive action so long carried on in the limb. It seemed indeed, at first sight, as if the vessels which supplied so many large and crossing jets of arterial blood could never all be closed. A single instant was sufficient to convince us that the patient's safety required all our expedition; and, in the course of a few minutes, hemorrhage was effectually restrained by the application of ten or twelve ligatures. The flaps were now brought together, and retained in contact by means of five or six stitches. Some dry caddis (lint) was laid over the wound, and lastly, I applied a single headed roller obliquely round the body

* Edinburgh Journal.

and stump, moderately tight, so as to afford proper support to the flaps, and then we lifted into bed the patient, who was wonderfully little exhausted."

The patient did extremely well for a month after the operation, when symptoms of ascites came on, under which he sunk.

Sir ASTLEY COOPER's *Amputation of the Hip-joint.*—No official account of this interesting case has yet been published. The patient is understood to be about 40, and had had his limb amputated before above the knee-joint. The operation was performed on the 16th January, and occupied 35 minutes:—four ligatures only were employed, and very little blood was lost. He is now (March 25th) considered to be out of danger. —We shall give the details at more length when Sir Astley, as we have no doubt he will, shall publish the case.

VI. PRACTICE OF PHYSIC.

The publications in this department are chiefly directed to the effects of what are called the New French Remedies, namely, Iodine, Sulphate of Quinine, Acetate of Morphine, &c., concerning which the testimonies are, of course, various, in consequence of the different genius of the experimenters as to observation, fancy, or prejudice, and the different constitutions and affections of the patients. It has always been thus, and, from the nature of things, it must always be thus, and the practice of medicine must always be proportionably uncertain and empirical.

Dr. GAIRDNER *on Iodine**.—The author, we perceive, in the well written Essay before us, is an advocate for this medicine, with which he has been successful in a considerable number of cases. We learn, however, that it has turned out very differently when prescribed, in similar cases, by others. May not this, in some instances, have arisen from the following shameful circumstance?

"I have," says Dr. Gairdner, "sent prescriptions for the hydriodate of potass to several chemists in London, and my prescriptions were said to have been made up; but, in a few days afterwards, when I called at their shops, in order to examine the medicine, I discovered that they were not even aware of the existence of such a drug."

If such is the practice of druggists, and we fear it is but too

* Essay on the Effects of Iodine on the Human Constitution, with Practical Observations on its Use in the Cure of Bronchocele, Scrofula, &c. By W. Gairdner, M.D. p. 64. 8vo. Lond. 1824.

much so, we cannot depend on any medicine which we ourselves have not seen made up. We shall probably give a complete review of Dr. Gairdner's book, along with other papers on Iodine.

ZIMMERMAN *on the Erysipelas of Infants**.—The author gives one successful case of this singular disorder, and expresses his belief that the induration of the cellular tissue and erysipelas in infants are identical, as they are described by M. Andry, and also under the name of *skin-bound*, by Denman, Underwood, and Henche.—For a more detailed account, we refer to our Review of Schmidt's Disquisitions. *Quart. Jour.* No. XVI.

M. CHOULANT'S *Tabular Views of Medicine*†.—We highly approve of the plan of this work: it is divided into twelve tables, exhibiting at a glance the history and chronology of the several branches of the medical sciences, according to the order of precedence in theory and practice, from the earliest times up to the beginning of the present century.

Mercury in Syphilis.—The controversy respecting mercury in this disease, is still keenly canvassed. We have now before us two advocates for the mercurial plan, one foreign ‡ and one British §. Although we confess that much may be said on both sides; yet, we think, if the circumstances pointed out in our review of Lagneau on Chancres, (*Quart. Jour.* No XVI.,) were attended to with care, there would be less dispute about the employment and the efficacy of mercury. Mr. Boyle advises very large doses of calomel, as the most effectual mode of subduing the venereal virus. M. Simon recommends profuse salivation.

DANIELL *on Charcoal in Constipation*‖.—Dr. Daniell, of Savannah, has exhibited large doses of charcoal, with success, in obstinate cases of constipation. The charcoal, he says, unites intimately with the slime of the bowels, forming balls from half an inch to three inches in diameter, and which often require the most active cathartics to expell them. He pre-

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* Einige Bemerkungen über Zellgewebeverhartung und Rose der Neugebohrenen, nebst Beobactung eines glüklic abgelaufenen Falles derselben. Von K. G. Zimmermann.

† Tafeln zur Geschichte der Medizin, &c. Von L. Choulant, D.M. Fol. Leipzig, 1822.

‡ Archives fur Medizin. Erfrahung. for May, 1823.

§ A Treatise on Syphilis, exhibiting the advantages of large doses of Submuriate of Mercury in the cure of that disease; also, an Inquiry into the Modus Operandi of Mercury, illustrated by experiments. By James Boyle, Esq. &c. &c. 8vo. pp. 166. London, 1824.

‖ Chapman's Journal.

scribed the charcoal in a case which he relates, in the dose of two table-spoonfuls every half hour, with enemata and other purgatives. From his description of the *modus operandi*, we should not, even in a bad case, be inclined to employ such quantities of charcoal.

Dr. CHISHOLM *on Constipation**.—In a bad case of constipation, which refused to yield to the usual remedies of purgatives, enemata, blood-letting, warm baths, &c., the author suspecting introsusceptio, had a strong solution of common yellow soap prepared; of which "more than a large wash-hand basinful was gradually, but perseveringly thrown up by means of Read's injecting machine, and retained by applying napkins to the anus as long as the patient could bear the distention." This had the desired effect of bringing away some stercoraceous matter, and in three days the patient was well. We think this important, as fatal cases of the same kind are occurring every day. Every practitioner ought to possess this useful machine, the expense of which is only about fifty shillings or three pounds.

M. WESTBURGH *on Tobacco in Ischuria*.—This is not altogether a new remedy, though the way in which the author exhibits it is rather novel. He gives the tincture in the dose of twenty drops every hour in a glass of linseed tea. The second or third dose is usually successful. In cases of gonorrhœa, also, where the water is made slowly and *guttatim*, he has employed the same remedy with advantage.

M. MAGENDIE's *Case of Hydrophobic Affection, Treated by Injection of Water into the Veins*†.—The following case, which has been much talked about, we give entire and without comment.

"About noon on the 15th of October, I was requested by M. Caillard, resident physician at the Hotel-Dieu, to come immediately to that Hospital to give my opinion relative to a man in the last stage of hydrophobia. I reached it about one. Several students whom I met, told me that if I wished to see the patient alive, I had not a moment to lose. The man had already been placed in a detached room; he had on a strait waistcoat, and was agitated with most furious motions: approaching the bed, I recognized all the characters of rabies; the eye threatening but not injected; exclamations; most violent efforts to liberate himself from restraint; change of voice; thickened saliva; and attempts to bite objects presented to him, alternating with intervals of repose. In these moments of short duration, he understood the reasoning and consolation addressed to him, but soon relapsed into fury. The sight

* Repository. † Journal de Physiologie, October 1823.

of liquids, or a mirror, excited extreme agitation. In the morning he had swallowed a few mouthfuls of fluids, but when I saw him, a spoonful of water poured between his lips, produced frightful convulsions of the muscle of the pharynx, and was violently spit out over the assistants.—Noise, or merely touching his hair with the finger, excited convulsions of incredible intensity. His body was alternately bent and extended with inconceivable force. The pulse was upwards of 150 in a minute, and respiration interrupted. From this combination of symptoms, I could not fail to recognize hydrophobia, and the near approach of death.

"I asked if the man had been bitten, but found that his friends knew nothing on the subject. He had been despondent for some time, his strength not permitting him to continue his work as a baker; his sadness had increased after having received a letter from a woman he loved; a fortnight past he had sought relief in drinking for several days; the consequence was copious bleeding from the nose; a physician was called in, suspecting cerebral congestion, he ordered thirty leeches, and three bleedings from the arm. Notwithstanding this treatment, he had been siezed with several attacks of fury, in which he threatened those about him, and drank with difficulty. His relations seeing him grow worse, and no longer able to restrain him, brought him in the night to the Hotel-Dieu. The patient had there been copiously bled from the foot without any diminution of the attacks, which became more forcible and more frequent.

[Here M. Magendie states that he had intended to innoculate a dog with the saliva from the patient, but that he was not able to procure a sufficient quantity.]

"The case being urgent, and bearing in mind the results of the experiments related in the first Volume of this Journal, in which I had seen the symptoms of rabies cease in dogs after the injection of tepid water into the veins, I resolved on trying this extreme measure.

"I procured a small hydrocele syringe in bad condition, and some water heated to 30° Reaumur. I exposed the patient's right arm by an incision in the strait waistcoat. I was struck by remarking several small wounds on the index finger, and another much larger placed over the second metacarpal bone, and apparently the result of a recent cauterization. The patient was unable to answer any question, and his friends not having any information on the subject, I set about exposing a superficial vein in the fore-arm, an operation rendered difficult by the constant motion of the patient. With the help, however, of five or six strong students, I passed two flat ligatures under the vessel, and made an opening in it large enough to admit the point of the syringe. It was now a quarter after one; I injected at nine times, water heated to thirty degrees, to the amount of about two pounds. On account of the bad state of the instrument, I calculate that about a dozen bubbles of air may have entered with the water.

"At each time that I injected a syringeful, I examined the patient, but he presented nothing particular, continuing to vociferate, to talk of his inevitable death, &c.; and I only stopped because I thought I had introduced a sufficient quantity of water to produce a sensible effect. The injection was finished at forty minutes after one: I tied the vein above and below the opening. Already, an unlooked for calm began to show itself; the pulse from 150, fell to 120, was soon 100, and within twenty minutes was 80. All the urgent and violent symptoms disappeared with a promptitude which astonished the assistants; for myself at this moment I experienced the most lively satisfaction I have ever felt.

"The patient recovered the use of his senses and understanding; a calm succeeded to his fury, his eyes resumed their natural expression, the convulsive motions ceased, and strange to say, he drank a glass of fluid without any difficulty. M. Caillard caused the strait waistcoat to be removed, and the patient begged to be allowed to go down into the court in order to make water. For half an hour this request was supposed to be the result of delirium, but he repeated it so often and so pressingly, that M. Caillard consented, and was surprised to find the patient walk quietly, supported by the students, to the door. Seeing that his desire was real, he was told that it would be better to make water in a corner of the room, which he did, and in a few minutes passed about a pound of turbid, yellowish urine, so fœtid, that it was necessary to remove it immediately.

"From this time, which happened an hour and a half after the injection, the patient inquired for his friends, saw them, spoke of his affairs, gained courage and confidence.

"His state was remarkable, and not like any thing known: he was without fever, his pulse not above 80; but all the motions of the system of organic life, as the contractions of the heart, respiration, speech, &c., were performed with a rapid trembling. When any muscle was touched, it was felt to be agitated with the same trembling; in short, the morbid phenomena presented by the patient were as uncommon as his position was new.

"In the evening of the 17th, he received the consolations of religion. Whether the impression thus made was too powerful, or from some other cause, hemorrhage from the intestines took place in the night; the blood was coagulated, apparently arterial, and was mixed with portions of solid fæces. This accident was followed by a little pain in the abdomen, which was relieved by fomentations and emollient injection.

"The improvement continued without interruption until the fifth day, when the patient complained of severe pains in the wrists, elbows, and knees. I at first thought them the results of his struggles during the fits; but in spite of emollients they became so violent, that it was with difficulty he could support the weight of the bed clothes. The left knee in particular was swelled, as were the wrist and elbow of the same side. On the seventh day, fluctuation became evident, principally in the knee. Besides these accidents,

clearly unconnected with the disease, and probably with the mode of treatment, another appeared. On the morning of his arrival at the Hotel Dieu, M. Caillard had judged it necessary to have him largely bled from the foot. In consequence of his sudden movements in a state of exasperation, two lancet points had been broken in the inner side of the tibia. These foreign bodies excited violent inflammation of the foot and back part of the leg, of which the patient complained much, and every thing denoted the formation of a large abscess in these parts.

"These symptoms seriously threatened the life of the patient; nor were they the only ones; vomiting of greenish fluid occurred; the abdomen became tender when touched in the region of the cœcum, and fever appeared. Some imprudent person told the patient that he had been rabid, and that an experiment had been performed upon him: from that time his mind became affected, he despaired of recovery, and feared at every moment that it was intended to suffocate him; in short, on the eighth day all hope of recovery was lost, and he died in the early part of the ninth; his death presented nothing remarkable; he sunk in a state of imperfect delirium.

The body was opened twenty-two hours after death, in presence of a great number of physicians and students.

Dissection.—"Our attention was first directed to that which had evidently caused the death of the patient: we found a large abscess in the back of the leg, occupying the space between the heel and the projection of the calf. We found the two lancet points still sticking in the inner side of the tibia, and surrounded by pus and the inflamed periosteum.

"We found the joints of the knee, elbow, and wrist of the left side filled with pus, and their synovial membrane highly inflamed. The cartilages, as often happens, did not participate in the affection.

"We did not expect to find any serious lesion of the intestinal canal, as no very striking symptom, connected with that part, had appeared; but the hemorrhage from the anus, and the pain which took place, indicated that it could not be altogether healthy; in fact the mucous membrane towards the termination of the small intestine, was reddened by the injection and development of its veins; this redness extended in a slighter degree as far as the jejunum. At the junction of the ileum with the cœcum were a dozen small superficial ulcerations: the largest were three lines long, and two wide; that they were recent, was proved by the corresponding mesenteric glands being but little swelled, and not changed in structure. The large intestine, pharynx, œsophagus and stomach, presented nothing worthy of notice.

"One remarkable phenomenon, was the decided putridity of the blood. It was every where fluid and had given out a large quantity of gas, which distended the heart and great vessels, and had caused sub-peritoneal emphysema of the stomach and intestines. The lungs were healthy, though somewhat loaded at the back

part; the smaller bronchial divisions were red, but the trachea was healthy.

"The nervous system presented nothing remarkable: there was an inconsiderable quantity of reddish serum at the base of the cranium, and in the vertebral canal. The veins of the brain and spinal cord were filled with red and fluid blood. The ganglia of the sympathetic nerve were in their natural state. The little wounds and the scar on the hand were examined attentively, and all present were struck by the analogy of the wounds with bites, and of the scar with the effects of recent cautery.

"It results from this history, that a disease presenting all the character of rabies, ceased on the introduction of a pint of warm water into the veins; that the patient survived this introduction eight days; that it did not appear to have produced any accident; and that death was caused by a local disease, unconnected with hydrophobia and the new mode of treatment.

"The hope of curing rabies by injecting water into the veins, already resting on some experiments on animals, hence acquires additional probability. It may even be possible, as some of my learned associates at the Hotel-Dieu have suggested, that the same measure may prove useful in certain extreme cases, in which the common resources of medicine are inadequate."

VII. MIDWIFERY.

One of the most important discoveries in female diseases is the emmenagogue, proposed by Dr. Lavagna, of Milan, which we were among the first to publish in this country, consisting of ammonia, qualified with milk, injected per vaginam. It has, we understand, been successfully tried both in public and private practice in this country. Dr. Copland thinks very plausibly, that other stimulant injections, such as wine properly diluted, might answer the same indication.

M. Breschet's *Case of extra-uterine Pregnancy.*—In November last, M. Breschet read to the Royal Academy of Medicine, at Paris, the Memoir of a singular case, in which the fœtus appeared to have been developed on the very substance of the uterus. The case came under his own observation; but he has brought together notices of similar cases from writers, who, in describing the occurrence, appear, he thinks, to have mistaken its nature.

M. Miguel *on Puerperal Convulsions* *.—This work obtained the prize proposed by the Society of Medicine of Paris for 1820, and appears to be a very complete work on the subject.

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* Traitè des Convulsions chez les Femmes enceintes au Travail et en Couche &c. Par A. Miguel. Paris, 1824.

We shall therefore hold it our duty to analyse it for the next Number.

M. Chaussier *on Puerperal Convulsions* †.—The Belladonna ointment seems to be fast gaining ground, as a local application. Our author employs it extensively, made from two drachms of the extract, moistened with distilled water, and triturated with simple cerate or prepared lard. He applies it to the os uteri by means of a small syringe, rounded at its extremity, and having an aperture which will admit the tip of the little finger. The piston is withdrawn, and a bit of the ointment, the size of a small filbert, is put into the aperture. The syringe is directed by the finger to the os uteri, and the ointment is then pushed out by the piston. It will dilate the os uteri in about thirty or forty minutes, without affecting the fundus or the body of it. M. Chaussier has used this with great succes from 1811.

VIII. MEDICAL JURISPRUDENCE.

This study is going on most vigorously, and treatises are multiplying upon it in all quarters. In a former part of this Number, we have reviewed, at some length, Dr. Gordon Smith's useful Manual; and we have besides no fewer than three works of merit on the same subject.

Professor Beck's *Elements of Medical Jurisprudence* *.—We have just received a copy of this work from the author, who deserves great credit for his arrangement and condensation of so many desultory facts, into clear order and judicious detail. We shall analyse this valuable work for next Number.

Dr. Wildberg's *Practical Manual* †.—This is the first time we have seen Medical Jurisprudence introduced into a general system of physic, though it is, we think, a highly laudable innovation, except for the space which it must occupy. Dr. Wildberg has only published the three first parts of his Manual. The first is on Medical Police, a branch, to our shame, almost unknown in Britain. The second part is on Legal Medicine. The third part is on the manner of drawing up Medical Reports.

M. Chaussier's *Collection of Memoirs on Legal Medicine* ‡.—This work is about the same size as Dr. Smith's, and it

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* Elements of Medical Jurisprudence. By T. R. Beck, M.D. Professor of the Institutes of Medicine, and Lecturer of Medical Jurisprudence in the College of Physicians and Surgeons of the Western District of the State of New York, 2 vols. 8vo. Albany, 1823.

† Praktisches Handbuch fur Physiker. Von C. F. S. Wildberg, 8vo. Munster, 1823.

‡ Recueil de Memoires, Consultations, et Rapports sur divers objects de Medicine Legale. Par M. F. Chaussier. 8vo. pp. 519. Paris, 1824.

contains many valuable facts. We shall give from it, in our next Number, whatever appears most worthy of notice.

Dr. Gordon Smith's *Oration.*—The annual oration delivered before the London Medical Society was by Dr. Smith, and we were much gratified that he selected his favourite subject of Medical Jurisprudence. We should be most willing to give an abstract of the oration did our limits permit; but it was too closely condensed, and so well reasoned, that it would require many pages to do it justice. We hope the Doctor will be prevailed on to publish it, as it contained many very important and interesting facts, and excellent reasoning on this now fashionable study.

IX. MATERIA MEDICA AND CHEMISTRY.

The republication of the London Pharmacopœia is the most prominent event in this department. We need scarcely say, that it seems to have produced very general disappointment, both from the non-introduction of new medicines, now daily used by most of the members of the College themselves; and, also, from the non-expulsion of many which are never used at all; while, so far as chemistry is concerned, the College seems not to be aware that it has made any progress at all for the last fifteen or twenty years, and the submuriate and oxymuriate of mercury, &c. &c., remain unchanged. But, without animadverting farther, where there is so much room for it in almost every page, we shall proceed to put in a succinct form, a view of the changes introduced.

New Articles in the Pharmacopœia.—Acetic Acid, distilled from wood, or Pyrolignic Acid; Bismuth, Cubebs, Elecampane root, Croton Oil, Garden Lettuce, Rhatany root, Black Pitch, Stramonium seeds and leaves, the Seeds of Conium, Colchicum, and Digitalis; Sulphate of Potass; Subcarbonate of Magnesia; Tartaric Acid; Glass of Antimony, Syrup of Sarsaparilla, Compound Confection of Pepper; and Ammoniated Spirit of Colchicum.

Expunged Articles.—Aloe Vulgaris, Vinum Album Hispanicum, and Oxide of Antimony.

Table of the Changed Names.

NOMINA PRIORA.	NOMINA NOVA.
Acidum aceticum.	Acidum aceticum dilutum.
Arsenici Oxydum.	Arsenicum album.
——————— sublimatum.	Arsenicum album sublimatum.
Calumbæ *Radix.*	Calumba.
Ceratum Lyttæ.	Ceratum Cantharidis.

Ceratum Plumbi Superacetatis.	Ceratum Plumbi Acetatis.
Cucumis Colocynthis, *Pomorum Pulpa.*	Cucumis Colocynthis, *Peponum Pulpa.*
Elaterii *Poma.*	Elaterii *Pepones.*
Elettaria Cardamomum.	Matonia Cardamomum.
Emplastrum Lyttæ.	Emplastrum Cantharidis.
Infusum Lini.	Infusum Lini compositum.
——— Rosæ.	——— Rosæ compositum.
——— Sennæ.	——— Sennæ compositum.
Lapis calcarius.	Marmor album.
Liquor Antimonii tartarizati.	Vinum Antimonii tartarizati.
Lytta.	Cantharis.
Lytta vesicatoria.	Cantharis vesicatoria.
Magnesiæ Carbonas.	Magnesiæ Subcarbonas.
Oxydum Arsenici album.	Acidum arseniosum.
Pix arida.	Pix abietina.
Plumbi Superacetas.	Plumbi Acetas.
Resina nigra.	Pix nigra.
Tinctura Lyttæ.	Tinctura Cantharidis.
Unguentum Lyttæ.	Unguentum Cantharidis.
——— Resinæ nigræ.	Unguentum Picis nigræ.

X. BOTANY.

Professor Hooker, of Glasgow, one of the first botanists in this country, has undertaken a work on General Botany, but, we regret to say, according to the *natural* method, which is any thing but natural. He intends, also, it is said, to discard Latin phraseology: we confess we cannot conjecture how he will accomplish such a task. Sir James Smith has, at last, published part of his British Flora in English: we say *part*, for like his Flora Britannica, we fear it is not likely ever to be completed. The truth seems to be, that Sir James is afraid to risk his phenogamous reputation by meddling with the obscurer parts of the Cryptogamiæ. But if we are right, why does he not obtain the assistance of Brown, or K. Greville, rather than leave his *opus magnum* in its present unfinished state? We strongly recommend to junior students a little work, called "First Steps to Botany," by Dr. Drummond of Belfast, as one of the plainest and most interesting introductions which we have seen. The Americans are making much progress in Botany; and, among other works of merit, we may mention Torey's Flora of the Northern and Middle sections of the United States.

XI. ZOOLOGY.

After a great pause in Zoology in this country, there has appeared part of the Translation of Cuvier's Régne Animal, with

notes, &c., by Mr. Griffiths. The first number of a Journal, also devoted to Zoology, and conducted by several Naturalists of name, has appeared since the publication of our last Number. The celebrated Bremser, of Berlin, has published splendid folio plates of intestinal worms; but, though this may lead to accuracy of idea, we are doubtful whether any practical utility can be served by it. We gave, in our last Number, an interesting paper containing Bremser's notions respecting the formation of intestinal worms.

XII. MISCELLANEOUS.

Death of Mr. John Barr.—We have here the painful duty of recording the loss of one of the most able and zealous contributors to our Journal. Mr. Barr was born in the parish of Houston, Renfrewshire, and having completed a very long and extensive course, both of philosophical and medical education, in the University of Glasgow, and spent about two years in very hard study in London and Paris, had the intention of commencing a Course of Medical Lectures in Glasgow next season; and, with this view, had given up, with considerable reluctance, a long contemplated medical tour through Italy and Germany. Intense study, however, had impaired his health; and when he arrived in London in January last, he appeared much emaciated, and was affected with a hard dry cough, and rheumatismal pains. To this supervened an attack of acute bronchitis, under which, in spite of the most active treatment, he sunk in a few days. Mr. Barr was about 26 years of age. He had, in conversation, a fine vein of happy humour, and though he was fond of company, he spared for this purpose but a very small portion of his time from his severer studies. We need not praise his acquirements as a medical writer; his papers in this Journal speak for themselves. Among these, we may mention the Reviews of Lagneau on Chancres; Lucas on Inflammation; Rochoux on Apoplexy; Ducamp on Strictures; Sir A. Cooper on Dislocations and Fractures; Bingham on Diseases of the Bladder; Boyer on Strangulated Hernia, and Diseases of the Kidneys and Ureters; and Biett on Couperose. These, we think, will be considered to manifest not only considerable practical knowledge, but philosophical penetration, and precision of thinking, of no common order.

Even within a few hours of his death, he could scarcely be persuaded that he was dying, till it was deemed adviseable to tell him that the *Facies Hippocratica* had appeared. "Ah then," he said, "it is all over—I die in peace with God and man."

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Thoughts on Prison Labour, &c. &c. By a Student of the Inner Temple. 8vo. *Rodwell and Martin.*

A Letter on the Nature and Effects of the Tread-Wheel, as an Instrument of Prison Labour and Punishment. Addressed to the Right Hon. Robert Peel, M.P., his Majesty's Principal Secretary of State for the Home Department, &c. &c.; with an Appendix of Notes and Cases. By one of his Constituents, and a Magistrate of the County of Surrey. 8vo. *Hatchard.*

A second Letter to Sir John Cox Hippisley, Bart. on the mischiefs incidental to the Tread-Wheel, as an Instrument of Prison Discipline: containing an examination of the Official Reports upon this subject, returned to the Secretary of State's Office during the present Session of Parliament. By John Mason Good, M.D. F.R.S., &c. &c. 8vo. *Baldwin, Cradock, and Joy.*

Section of the Leg, forming part of a Series of Engravings, designed as Practical Illustrations of the Surgical Anatomy of the Blood-Vessels, Nerves, &c., relating to Amputation. By Thomas Alcock, Surgeon. Folio. *Burgess and Hill.*

An Appeal to the Public and to the Legislature, on the Necessity of Affording dead Bodies to the Schools of Anatomy by Legislative enactment. By William M'Kenzie, Andersonian Professor of Anatomy and Surgery, &c. &c. Glasgow. 8vo. *Robertson and Atkinson.* London, *Anderson.*

INVALID BEDSTEAD.

James Rawlins. Patentee.

Penton Place. Pentonville.

ANDERSON'S

QUARTERLY JOURNAL

OF

Medicine and Surgery.

Nº III. JULY, 1824. Vol. I.

Article I. *Elements of Medical Jurisprudence.* By T. Romeyn Beck, M.D., &c. 2 vols, 8vo. pp. 418, 471. Albany, (United States.) 1823.

The yearly increase of elaborate works on this comparatively recent branch of study, is a strong proof of the increasing attention paid to it by the profession. It is our duty, as journalists, accordingly to mark the progress and record the improvements made by each successive writer, in order to furnish our readers, who may not have opportunity or leisure to peruse the multiplying and voluminous works on the subject, with the best and newest portions of these, and enable them, at a small expense of time, to keep pace with the advancement of science. In our former reviews of the works of Dr. Paris and of Dr. Gordon Smith, they will meet with some interesting details and extracts, and we shall now add to these by a careful analysis of the work before us.

We have mentioned before, in a general way, that Dr. Beck's work is a good medium between the too bulky work of Dr. Paris, and the rather too concise work of Dr. G. Smith. Each of these, however, is well adapted to its own purpose—that of Dr. Paris, not so much for the medical practitioner as for the lawyer's library, and for legal consultation; that of Dr. Smith, as a text book for the student, and a manual or remembrancer; while the work before us is superior to either as a book for practical medical consultation, and for the library of medical practitioners. On this ground we should like to see it re-published in England, or something on the same plan and scale,

though we could not promise, in the present infancy of the study, that it would be a profitable speculation.

Dr. Beck promises, if his present work be successful, to bring forward another, on the collateral subject of "Medical Police." He could not, we think, confer a greater favour on his countrymen; and we should wish to see our own authors attending to this too much neglected subject. We think that Dr. Gordon Smith could not better employ any time he may have to spare, than in preparing a volume on the subject, as a companion to his Forensic Medicine. We feel for the reputation of our country, when we see so many French and German works, and papers directed to this great national subject, while we can boast of scarcely a single dissertation of any importance, if we except, perhaps, the late voluminous papers respecting prison discipline and the new punishment of the Tread-wheel. These, however, are a promising commencement, and we hope that many other subjects, of no less interest, may soon be brought under public discussion. We may be perhaps permitted to allude here to the late bye-law of the Royal College of Surgeons, which has created so much discussion, and prompted so much irritation among those whom it affects. We think, that to say the least, it was hasty and ill-advised to pass a law so evidently partial in its operation; but as this is not the place to discuss its merits, we only suggest it as a subject of Medical Police, not less important both to the profession and the community, than the celebrated Apothecaries' Act itself, the imperfections of which are so well known to all our readers.

Dr. Beck arranges his materials under the heads of—feigned diseases; disqualifying diseases; impotence and sterrility; doubtful sex; rape; pregnancy; delivery; infanticide; legitimacy; presumption of survivorship; age and identity; mental alienation; persons found dead; wounds on the living body; poisons; mineral poisons; vegetable poisons; and animal poisons. We now proceed to make such extracts and remarks as shall appear to us to be useful and interesting to our readers, following Dr. Beck in the order of his subjects.

Feigned Diseases.—This is a subject which frequently calls forth the ingenuity of the medical officers of Hospitals, and of the army and navy; and in proportion as the impostors are successively detected, their devices are multiplied, and new impositions discovered, which often deceive the most skilful. The privations and tortures which such persons will endure is almost beyond belief; blistering, bleeding, purging, and continued nausea; and one person is recorded to have persisted in keeping his knee-joint contracted, till the amputating knife

was actually about to be employed. Foderé well remarks, that during the time when the French conscription was in full force, it became almost as difficult to detect a feigned disease, as to cure a real one. Dr. Beck is more copious upon this head than either Dr. Paris or Dr. G. Smith. Zacchias mentions what he calls,

Simulatio latens.—"By this he understands a case in which disease is actually present, but where the symptoms are falsely aggravated, and greater sickness is pretended than really exists. This may be more difficult of detection in some respects, and it requires, like the cases above mentioned, the skill of the physician; and that too, experienced in the history of disease, to guide him aright. Generally speaking, it will be his duty to steer a middle course, between too great incredulity and too great confidence, and where the interests of a third person are not liable to be affected, to lean towards the patient. I can however imagine, that cases have occurred, in which disease has been magnified, in order to increase damages, or to revenge insult. Here the conduct of the medical examiner must be cautious, and he should carefully apply the rules already laid down."

We think that this species of imposition is much more common than Dr. Beck seems to suppose, and particularly in the case of spoiled children, and others who make it the means of extorting increased caresses and attention from relatives and friends.

The Pulse.—We might naturally think that any change in the pulse would be the hardest of all other things to feign; and yet the cases recorded put an end to all doubt on the subject.

"Should deceit be suspected, the physician may examine whether ligatures have not been applied to interrupt the pulsation, and he should ascertain whether the arteries beat at the corresponding extremity. I am indebted to my late worthy preceptor, Dr. M'Clelland, of Albany, for a case illustrating this point. During the period of his attendance at the Royal Infirmary in Edinburgh, a person applied for and obtained admission on the score of ill health, who had formerly been a patient there. The attending physicians examined the pulse at the right wrist, but found none; he then tried the left, but with similar success. The trick was carried on for several days, at the end of which time it was discovered that the patient was in sound health, but that whenever the pulse was to be examined, he pressed his finger on the artery under the arm-pit."

Urine.—The suppression of urine was a frequent disease among the female convicts at the New York state prison. Dr. Blatchford, who was some time resident physician, relates two cases, in which the frequent use of the catheter obviated all the evil effects which a voluntary suppression might have produced, and also indicated when the pain and distress were groundless.

By a reference to the registers, he found that this was a common complaint immediately after the initiation of every resident physician.

Dr. Hennen says, that incontinence of urine is almost always detected by giving a full dose of opium at night, without the knowledge of the individual, and introducing the catheter during sleep. Foderé, in such cases, put a ligature on the penis, and sealed it. In real incontinence of urine the penis, when thus bound, soon becomes enlarged, which does not happen in the feigned disease.

"A boy at Bilso (Staffordshire), A.D. 1617, accused a woman of having bewitched him; and succeeded so well in feigning convulsions, &c., that she was tried and condemned to die. Dr. Morton, the bishop of the diocese, suspecting imposture, caused him to be confined and watched. He grew apparently worse, and the urine which he openly voided was black. The good Bishop almost despaired of saving the life of the female, in consequence of the dangerous situation of the boy. A vigilant spy, however, detected him in dipping a small piece of cotton in an ink bottle placed at the side of his bed. This he put inside the prepuce, in order to give the urine its colour when he excreted in public." Page 6.

Maiming.—Under this head, Dr. Beck mentions a case from a rare book, entitled the "History of Knavery." A boy, aged eleven, pretended to be lame of both legs, and used to go shoving along on his breech. Upon his being taken to the workhouse, and the overseers proposing to make him a tailor, he confessed that his brother, four years before, by advice of certain beggars, had contracted his legs, and turned them backwards, so that he never used them from this time, but begged for the behoof of himself and his brother. He gave an account of many other deceptions of the same kind. His legs were set straight, so that he now has the use of them.

Dropsy.—"The following case, from the Acta Naturæ Curiosiorum, will show how much we ought to distrust that affectation of modesty which will not permit a complete investigation. A young female at Strasburg, from the enlargement of her abdomen, had led the public to doubt the purity of her character. The distention continued so long as to dissipate the suspicion; and for thirty-nine years she continued to increase in bulk, and excited the commiseration and charity of all who saw her, in such a manner as to lead a highly comfortable life. Her case excited the attention of the physicians and surgeons; and they waited with some impatience, until her death should develope the nature of her extraordinary disease. No tumour was found; but in her wardrobe was found a sack, or cushion, weighing nineteen pounds, and so made as to fit the shape of the abdomen. This female would never allow a medical man to examine the seat of her pretended disease."

Emphysema.—Sauvages mentions a mendicant, who gave to his child all the appearances of hydrocephalus, by introducing air between the integuments and the muscles of the head, near the vertex. The fraud was detected by removing the patch over the hole by which he introduced it. A mountebank, at Brest, by similar means used in different parts of the body, produced the most hideous deformity in a child; and lately, a female in France, in the same way, gave herself all the appearance of dropsy. The smallest possible aperture will serve for such a purpose; but as the other symptoms of such diseases are not present, the fraud is easily detected.

The sac of a hernia has been ingeniously imitated with the bladder of an ox; and prolapsus of the rectum or uterus, by a piece of intestine, in which a sponge filled with a mixture of blood and milk was placed. It was fixed into the vagina, or the rectum, in such a manner, that one of its extremities was left hanging out.

Ulcers.—"Frauds of this description are frequently practised in Hospitals, or to avoid the performance of labour of every kind. In 1810, a fellow enlisted in the Marines at Portsmouth, and received the full bounty. In a few days, it was discovered that he had a very bad leg. On investigation, it was proved by his wife and others, that to avoid going on duty, he had made an incision in the flesh just upon the shin-bone, and put a copper half-penny on the wound, which almost immediately caused a violent inflammation. He ultimately, however, paid dearly for his speculation; as a mortification followed, and it was found necessary to amputate the limb."

Cachexia.—Several substances are taken by imposters to make the countenance pale or livid; among which, cumin seeds have been used from remote antiquity, being mentioned by Dioscorides, Persius, Horace, and Pliny. They are still used, according to Foderé, for the same purpose in France. The following singular case is given by Dr. Beck:—

"A very curious work was published at New Haven, in 1819, under the title of 'The Mysterious Stranger; or, Memoirs of Henry More Smith.' It purports to be written by the Sheriff of King's County, New Brunswick, and I have repeatedly understood, that there is no doubt of the authenticity of all the material facts. The hero of the story was a most accomplished villain. While in the prison at Kingston, New Brunswick, he began to spit blood, had a violent cough and fever, and gradually wasted away, so that those who visited him supposed his death was rapidly approaching; this continued for a fortnight, and his weakness was so great, that he had to be lifted up in order to take medicine or nutriment. A turnkey unfortunately, however, left the door of the prison open for a

few moments, in order to warm a brick for his cold extremities: on his return, Smith had disappeared. After many adventures and hair-breadth escapes, he is now a prisoner in the Newgate of Connecticut. There also he has feigned cachexia, hæmoptysis, and epilepsy, but with no success. He confessed that he pretended to raise blood by pounding a brick into a powder, putting it into a small bag, and chewing it in his mouth. He contrived to vary his pulse by striking his elbows, and said he had taken the flesh off his body in ten days, by sucking a copper cent in his mouth all night, and swallowing the saliva."

Pain.—This is perhaps the most frequent of all feigned complaints, as it is the easiest to simulate, and the most difficult to detect. We find, therefore, many cases in works on medical jurisprudence and police, of a very singular character, arising from devices for this species of imposition.

"An artillerist, from the garrisons of Fort de Bouc, was brought to the hospital at Martigues, with a violent pain in his left leg, and which was attributed to sleeping on damp ground; during the space of eight months, a variety of antimonial preparations, together with mercurials and tonics, when indicated, where administered, along with local remedies, but without any relief. The leg, from the repeated use of epispastics and cauteries, became thin, and rather shorter than the other; while from the low diet ordered, there was a general paleness and lankness of the system. Under these circumstances Foderé could not refuse him a certificate as a real invalid. With the aid of a crutch, he dragged himself to Marseilles, where he obtained the promise of a discharge. He was ordered to return to the fort, to wait its arrival; but, on his way thither, being too overjoyed, he was met by his commander, walking without his crutch. On being put in prison, he avowed the fraud."

Catalepsy—Though some have doubted the existence of this affection, in which, on the attack of the fit, the person remains without motion or feeling in the position in which he was seized; yet there seems to us to be unquestionable evidence on the subject. At present, we have chiefly to do with its simulation. The most wonderful case of this kind is that of Phineas Adams, a deserter from the Somerset militia, of the age of eighteen.

"From the 26th of April, to the 8th of July, 1811, he lay in a state of insensibility, resisting every remedy, such as thrusting snuff up his nostrils, electric shocks, powerful medicines, &c. when any of his limbs were raised, they fell with the leaden weight of total inanimation. His eyes were closed, and his countenance extremely pale; but his respiration continued free, and his pulse was of a healthy tone. The sustenance he received was eggs diluted with wine, and occasionally tea, which he sucked through his teeth, as all attempts to open his mouth were fruitless. Pins were thrust under his nails to excite sensation, but in vain. It was conjectured, that

the present illness might be owing to a fall; and a proposal was consequently made by the surgeon, to perform the operation of scalping, in order to ascertain, whether there was not a depression of the brain; the operation was described by him to his parents, at the bed-side of their son, and it was performed—the incisions were made, the scalp drawn up, and the head examined. During all this time, he manifested no visible sign of pain or sensibility, except when the instrument with which the head was scraped, was applied; he then, but only once, uttered a groan. As no beneficial result appeared, and as the case seemed hopeless, a discharge was obtained, and he was taken to the house of his father. The next day, he was seen sitting at the door talking to his parents; and the day after, was seen at two miles from home cutting spars, carrying reeds up a ladder, and assisting his father in thatching a rick."

Disqualifying Diseases.—This subject is perhaps of less general interest than the preceding; but it is extremely useful to army and naval officers, and occasionally requires attention from every class of practitioners. Among the latter are the disqualifying diseases in civil and criminal cases; the former refer only to naval and military service. Specified rules, however, upon either of these heads cannot be given with much precision, and a great deal must accordingly be left to the judgment of the practitioner. Humanity as well as utility dictates that the undoubted subjects of maladies, that would be aggravated by particular offices and duties should be exempted from the same. In the case of important witnesses, those who are unable to travel, may serve the ends of justice, by being examined in their own houses. Disqualifications on marriage come under other heads. When the state of a criminal again would render irons, or hard labour more dreadful than death itself, it would be the height of cruelty to subject him to it. In cases of the execution of criminals, we may remark, that some women have been executed, though they declared themselves pregnant, in consequence of the testimony of midwives, who examined them and declared to the negative. Foderé mentions a case of this kind, in which, after execution, a fœtus, of the third or fourth month, was found in the uterus. The midwives who had given witness were severely reprimanded, and it is very wisely ruled, that in all doubtful cases in future, the execution should be postponed.

Dr. Beck is much more explicit and copious on military disqualifications than Dr. Smith, though Dr. S. is evidently much better acquainted with the subject practically. Dr. Paris has most culpably omitted it altogether, for what reason we do not know.

Impotence and Sterrility.—It seems to be possible, as is remarked by Zaechias, that certain diseases may so change the

state of the system, as to produce an alteration in the generative power. Avenzoes, for example, relates of himself, that during the whole period of youth he had no children, but became a father shortly after recovering from a violent fever. Zacchias also gives the case of an artificer, who lived 24 years with his wife without issue; but shortly after his convalescence from illness, he became a father, and afterwards had many children. The following case is interesting:—

"A man, named Aurelius Lingius, aged 60 years, had been affected, during the last years of his life, with occasional attacks of fever, accompanied with gouty pains, which at intervals made him extremely ill. For the space of two months, however, he appeared on the recovery; when being seized with a fever and ague, he died. His wife declared herself pregnant, and six months after his death, was delivered of a healthy child. Its legitimacy was contested on the ground that the husband, before his last illness, was incapable; and this opinion was corroborated by his own confession to the physician attending him. His wife allowed the truth of this statement; but asserted, that his powers had returned sometime before his decease. In this state of the case, Zacchias was consulted; and he decided in favour of the chastity of the wife, for the following reasons: Aurelius had been twice married, and by each wife has had several children. The disease under which he laboured, was a healing one; and his powers were probably perfect, during the period of convalescence. His age does not prevent the possibility of his producing pregnancy in the female. Symptoms of this were present during his life-time; and although he was known to be extremely jealous, yet his virtue remained undiminished towards her. And finally, the intervals of ease, that accompany articular pains, together with the fact that she always reposed in the same bed with him, were, in the mind of Zacchias, conclusive arguments. The judges decided in favour of the female*."

Doubtful Sex.—This is in most cases analogous in its bearings upon legal medicine, with the preceding subject. The ancient stories of hermaphrodites are now considered to be fabulous exaggerations, or enigmas, not ranking higher than the inscription, "Ælius Lælius Crispus, neither man, woman, nor hermaphrodite, but all these." All supposed hermaphrodites are referred by Dr. Beck, to males, with some unusual organization, or position of the urinary or generative organs; to females with an enlarged clitoris, or prolapsed uterus; or, to individuals, in whom the generative organs have not produced their usual effect in influencing the developement of the body; and hence it follows that so far from exercising the powers of both sexes, they are incapable of exerting any sensual function what-

* Zacchias, Questionum Medico-Legalum, 23.

ever. According to the law of England, as laid down by Blackstone, and Coke: a monster, if it hath human shape may inherit; and every heir, is either male, female, or hermaphrodite; and if the latter, shall inherit according to that sect that doth prevail. The same rule holds in cases concerning tenants to the courtesy. On this subject, Dr. Beck, has a decided superiority over our British writers.

Rape.—Our author has given a most learned and elaborate chapter on this subject, which contrasts strongly with Dr. Paris's, in which we have abundance of irrevelant law, and law cases, while the medical details are preposterously thrust into the notes. Dr. G. Smith's article on Rape, is short but excellent. With regard to the existence of the hymen, though it has been considered unnatural by Ambrose Paré, Palfyn, Linnæus, Columbus, Dionis, and Buffon, yet, when we can oppose to these the names of Fabricius, Albinus, Ruysch, Morgagni, Haller, Diemerbroeck, Heister, Riolan, Sabatier, Cuvier, and Denman, we may consider its existence as proved beyond a doubt. Cuvier found it not only in women, but also in mammiferous animals, which is a strong analogical evidence in its favour. Gavard found it uniformly in dissecting fœtuses, and children newly born; and in one case, he found it untouched in a woman aged 50. Yet the hymen, as Dr. Beck properly states,

"May be wanting from original malconformation, or it may be destroyed by disease, or some other cause, and yet, the female may be pure. On the other hand, it may be present, and yet the female be unchaste; nay, she may become pregnant without having it destroyed. Zacchias remarks, that it will not be ruptured when it is thick and hard. A disproportion between the organs, or connection during the presence of menstruation, or fluor albus, are also mentioned by him. Gavard, whom I have already mentioned, found it perfect in a female, thirteen years of age, who was labouring under the venereal."

"These observations certainly lead us to doubt whether the presence or absence of the hymen deserves much attention, and I believe the opinion of physiologists generally is, that it is an extremely equivocal sign. I am, however, unwilling to go as far as most of the later writers on legal medicine, who virtually reject it altogether. While it must be allowed that it can be destroyed by causes which do not impair the chastity of the female, we are justified, I think, in attaching considerable importance to its presence. It would be difficult to support an accusation of rape, where the hymen is found entire."

On the subject of rape, it is of importance to know, that certain idiopathic diseases may assume the character of external violence; such as swelling and inflammation of the labia, pain,

&c. A remarkable case of this kind occurred at Manchester. A female child, aged four, had slept several nights with a boy aged fourteen. The pudendum was observed all at once to become highly inflamed, sore, and painful. The child complained that the boy hurt her during the night. As the child died within a few weeks, the boy was tried, and a verdict of murder found against him. But in the course of a very short time, Mr. Ward, the surgeon on whose evidence the boy had been convicted, found several cases precisely similar, where no violence was or could have been done. The poor boy was in consequence freed. Dr. Percival says the disorder was typhus, with mortification of the pudenda.

"It is of great importance that the physician understand the possibility of such diseases occurring; but we must take care not to run into the opposite error of ascribing inflammation, ulceration, and discharge, in cases where violence has been alleged, to this disease, without sufficient grounds; for it is extremely improbable that diseases which occur so rarely, should happen to appear in a child to whom violence was offered, unless that violence had some effect in producing it."

It has been a question whether the existence of the venereal disease in the female ought to be considered in favour or against her accusation of rape; and there can be no doubt that, if the marks of it are recent, this ought to be held corroborative evidence. The examination, however, ought to be within three days, and this disease does not usually appear so soon. Even if this disease seems to be of long standing, though it would testify against the chastity of the accuser, it ought not to go all in favour of the accused, for we think it quite possible for a rape to be committed even on a prostitute, and the fact of habitual prostitution, though proved against the accused, ought not, we think in justice, to invalidate the accusation if borne out by sufficient evidence.

Sodomy.—The late lamentable frequency of the horrid crime against nature, renders it unhappily necessary to be introduced into legal medicine, though it is omitted both by Paris and Smith. Dr. Beck remarks that

"It may be required to examine the individual on whom it has been committed. If without consent, inflammation, excoriation, heat, and contusion will probably be present. The effects of a frequent repetition of the crime are a dilatation of the sphincters, ulcerations of the parts, or a livid appearance and thickening. It has been suggested, that secondary symptoms of lues might be taken for these, but I am hardly of this opinion. No man however, ought to be condemned on medical proofs solely."

Pregnancy.—As this subject so very frequently involves the honour, or the life of females, and also hereditary property, it becomes of much public interest, and every practitioner ought to study the principles of it in a medico-legal view.

Enlargement of the Abdomen.—"In tympanites, the abdomen is hard and elastic, and sounds like a drum when pressed; and there are irregular elevations which appear to roll under the finger. Dropsy also, when not encysted, is characterized by its peculiar symptoms; and schirrosity, by its indurated and unequal swelling. All these diseases, if the observer exercises patience and judgment, may be distinguished from pregnancy. Encysted dropsy will be understood with more difficulty, as no fluctuations will be observed; and the best advice probably is, to mark the symptoms as they daily become more aggravated in this disease, while the slighter affections of pregnancy generally wear off. Even if we have settled that there is a tumour of the uterus present, it is not certain that it is caused by a fœtus. It may arise from a mole, from hydatids in the uterus, or from a schirrous state of that organ. These remarks sufficiently prove, that enlargement of the abdomen is a sign of little importance in determining the question of pregnancy. It should be always noticed, but never relied on."

Change in the state of the Mammæ.—"The appearance of milk, which is so common towards the latter stages, may be unattended with pregnancy. Hebenstreit states, that he has known females in whom this fluid was produced by repeated friction, suction, &c. A servant girl, says Belloc, slept in a room with a child whom it was wished to be weaned. Being disturbed in her repose by its cries, she imagined, that by putting it to her breast, it might be quieted. In a short time she had milk sufficient to supply its wants. An account is also given in a M. S. in the collection of Sir Hans Sloane, of a woman at the age of 58, who had not born a child for more than 20 years, nursing her grand-children one after the other. Similar cases are mentioned by Foderé; in particular, he relates an instance of a female, who, on the point of being conducted to prison, declared herself a nurse. Although this was a falsehood, yet in a few moments she produced the requisite proof. The author also suggests, that immediately after the cessation of the menses, milk is often secreted."

"Dr. Francis, in his edition of Denman, gives the following case on the authority of professor Post. A lady of this city (New York) was almost fourteen years ago, delivered of a healthy child, after a natural labour. Since that period, her breasts have regularly secreted milk in great abundance, so that, to use her own language, she could at all times, easily perform the office of a nurse. She has uniformly enjoyed good health; is now about thirty-five years of age, and has never proved pregnant a second time, nor had any return of the menses. (Denman, p. 229.) Even men are said to have suckled children. Thus the bishop of Cork relates a case in the

Philosophical Transactions, where the father fed his child in this way, (vol. iii. p. 810.) He examined the breasts, and found them very large. It does not appear however that he saw the act itself."

Suppression of the menses.—" Dr. Denman and others, conceive that this symptom is a never failing consequence of conception, and the former in particular, intimates that a contrary opinion has its origin in credulity or vanity. It is certainly a strong argument, that an individual of the extensive practice of this accoucheur, never met with a case invalidating the rule; but it is no less true that observers of equal eminence, have occasionally witnessed deviations from it. Dr. Heberden knew a female, who never ceased to have regular returns of the menses during four pregnancies, quite to the time of her delivery. Deventer makes mention of one who became pregnant before menstruating, and immediately after conception, this discharge returned periodically until her delivery, and this was the case during several successive pregnancies, inverting as it were the usual order of nature. Dr. Francis states, that Dr. Hosack had a patient, who, during her last three pregnancies, menstruated until within a few months of her delivery, and, notwithstanding, brought forth a healthy child at each labour."

We ourselves know more than one case precisely similar; and cannot but wonder at Denman's opinion.

Motion of the Fœtus in utero.—The term quickening implies the first sensation which the mother has of the motion of the child; or the feelings may perhaps be more probably produced by the impregnated uterus starting suddenly out of the pelvis, into the abdominal cavity, which will explain the variety in the period of its occurrence, and the faintness which usually accompanies it from the removal of the pressure upon the iliac vessels, and the blood by consequence suddenly rushing into them.

" Considerable variety occurs as to the time of quickening. Dr. Denman observes, that it happens from the tenth to the twelfth week, but most commonly about the sixteenth after conception. Again, Puzos, a celebrated continental accoucheur, says that it takes place at the end of two months, but most commonly at the expiration of eighteen weeks. Hydropic women, he adds, do not observe it until the sixth or seventh month. And in a late trial for abortion in England, the medical witness deposed, that it took place at eighteen weeks, sometimes at fourteen, and sometimes not till twenty weeks, but mostly at eighteen. That he never knew it so late as twenty-five, though it might happen in some cases, at twenty-one or two."

In common cases in ordinary life, the existence of pregnancy is seldom doubtful; but the case is altered when a medical witness is called, to prove it upon oath. He is then bound to weigh all the possible causes, besides pregnancy, which may produce the various symptoms, and he must recollect that all of them occasionally prove equivocal. *There is no one invariable*

sign of pregnancy, and it is probably well that there is not. Delay is therefore in most doubtful cases of the utmost importance, and an opinion ought seldom to be hazarded before the sixth month.

"He is justified in cases where it is supposed to be concealed, in giving a strong opinion in favour of it, when the menses are suppressed, and the patient continues in good health; when the abdomen gradually enlarges and the breasts increase in size, and the areola around them becomes dark coloured; and when on examination, the motion of the fœtus is perceived, and the neck of the uterus is found diminishing and its orifice thin. The combination of these symptoms is calculated to prevent that error to which the study of a single one might lead."

Superfœtation.—Not to mention Hippocrates, Aristotle, and Pliny; Buffon's case of the woman in South Carolina, who had twins, one white and one black is well known. Dr. Mosely mentions another case of twins, in which one was a mulatto and the other a negro. We have given a similar instance in the first series of this Journal, vol. iii. p. 350. Dr. Maton's case is still more extraordinary of an Italian lady, who was delivered of a second child, three months after a preceding accouchement, both children being born perfect. The following from Foderé is perhaps the most extraordinary on record, and was communicated by Dr. Desgranges, of Lyons, the narrative being accompanied by a legal attestation under the oath of the mother.

"The wife of Raymond Villard, of Lyons, married at the age of twenty-two, and became pregnant five years thereafter, but had an abortion at the seventh month, on the 20th of May, 1779. She conceived again within a month, and on the 20th of January, 1780, eight months after her delivery, and seven months from her second conception, she brought forth a living child. This delivery was not accompanied with the usual symptoms—no milk appeared—the lochia were wanting, and the abdomen did not diminish in size. It was accordingly found necessary to procure a nurse for the child.

"Two surgeons visited this female, and were at a loss with respect to her situation. They called Dr. Desgranges, in consultation, who declared that she had a second child in the womb. Although this was strongly doubted, yet three weeks after her delivery, she felt the motion of the fœtus, and on the 6th of July, 1780, (five months and sixteen days after the first birth,) she was again delivered of another living child. The milk now appeared, and she was enabled to nurse her offspring. It is not possible, adds Dr. Desgranges, that this second child could have been conceived after the delivery of the first. 'Car le mari ne lui avait renouvelé ses caresses, que vingt jours après, ce qui n'aurait donné au second enfant que quatre mois, vingt sept jours.'"

Dr. G. Smith acknowledges that he cannot clear up these

mysterious cases of superfœtation, and therefore avoids the discussion. Dr. Paris, after a comprehensive review of the most authentic cases, inclines to follow the opinion of Haller:—"Os uteri nunquam clausum est; ideoque potest super-fœtari non solum a die sexto ad trigessimum, aut primis duobus mensibus, sed omni omnino tempore." (*Physiologia*, X. P. 212.)

DELIVERY.—The subjects comprehended under this division are concealed or pretended delivery; the signs of the death of the child before or during delivery; the signs of maturity or immaturity; and the state necessary to enable the new-born infant to inherit. The following characteristics must be carefully noted, in cases where any doubt arises about the reality of delivery.

"If the female be examined within three or four days after the occurrence of delivery, the following circumstance will generally be observed; greater or less weakness, a slight paleness, of the face, the eye a little sunken, and surrounded by a purplish or dark brown coloured ring, and a whiteness of the skin, like a person convalescing from disease. The belly is soft, the skin of the abdomen is lax, lies in folds, and is traversed in various directions, with shining, reddish, and whitish lines, which especially extend from the groins and pubis, to the navel. These lines have sometimes been termed lineæ albicantes, and are particularly observed near the umbilical region, where the abdomen has experienced the greatest distention. The breasts become tumid and hard, and on pressure emit a fluid, which at first is serous, and afterwards gradually becomes whiter, and the presence of this secretion is generally accompanied with a full pulse, and soft skin, covered with a moisture of a peculiar and somewhat acid odour. The areolæ round the nipples are dark coloured. The external genital organs, and vagina, are dilated and tumefied throughout the whole of their extent, from the pressure of the fœtus. The uterus may be felt through the abdominal parietes, voluminous, firm, and globular, and rising nearly as high as the umbilicus. Its orifice is soft and tumid, and dilated so as to admit two or more fingers.

"The fourchette or anterior margin of the perinœum, is sometimes torn, or it is lax, and appears to have suffered considerable distention. A discharge, (termed the lochial) commences from the uterus, which is distinguished from the menses, by its paler colour, its peculiar and well known smell, and its duration. The lochia are at first of a red colour, and gradually become lighter until they cease."

Several of these signs however, require more minute attention, as mistakes may arise, and have sometimes arisen from want of accurate observation of the following particulars:—

"The lochial discharge might be mistaken for menstruation or fluor albus, were it not for its peculiar smell, and thus it has been found impossible by any artifice to destroy. 2. The soft parts are fre-

quently relaxed as much from menstruation, as from delivery; but in these cases, the os uteri and vagina are not so much tumefied, nor is there that tenderness and swelling. And again, when all signs of contusion disappear after delivery, the female parts are found pale and flabby. This circumstance does not follow menstruation. 3. The presence of milk. This must be an uncertain sign, for reasons stated in the chapter on Pregnancy. It is possible for this secretion to take place independently of pregnancy. The most unequivocal form in which it can appear, is, when the breasts are tense and painful, and filled with the fluid of its usual nature—not serous and watery, as is observed in pretended cases.

"It is also to be remarked, that this secretion goes on during the presence of the lochia, while, on the contrary, the breasts become flaccid and almost empty, if the menses supervene, and fill again when they disappear. Should, therefore, a case occur where doubts are entertained, it would be proper to notice the state of the breasts while the discharge (of whatever nature it may be) is present. 4. The wrinkles and relaxation of the abdomen which follow delivery, may be the consequence of dropsy, or of lankness following great obesity. This state of the parts is also seldom very striking after the birth of a first child, as they shortly resume their original state. 5. The lineæ albicantes, will often remain for life, and hence should not be depended upon in cases where females have had several children."

With regard to the signs of death in the child before or during delivery, the greatest accuracy is required from the connection which the subject has with abortion and infanticide. The causes which may have occasioned the death of the fœtus ought always in legal questions to be considered; such as the unhealthiness of the mother's habitation, her mode of dress, want of food or improper use of it, violent exercise, too great labour, violent passions of the mind, either of the exciting or depressing kind, venereal excess, intemperance, diseases, such as hæmorhage, or convulsions, contagious disorders, such as syphilis, or small pox, falls, wounds, or accidents generally, any inordinate evacuation, and all the usually enumerated causes of abortion, may have produced the death of the infant.

The signs of the death of the fœtus during pregnancy.—"A want of motion in the child—the womb feels as if it contained a dead weight, which follows the direction of the body as it moves to one side or the other—the navel is less prominent—the milk recedes, and the breasts become flaccid—the mother feels a sense of lassitude and coldness accompanied with headache and nausea. As equivocal signs may be added, a paleness of the face—the eyelids having a livid circle around them—the presence of slow fever and melancholy, and a fœtid breath. These if all present, form a strong presumption in favour of the destruction of the offspring. Individually, however, they are liable to be mistaken or confounded. If actually

dead, and long detained in the uterus, putrefaction takes place; if the membranes be not broken, the fœtus may remain a long time in utero, without decomposition. This is mentioned by Baudelocque and others; but authors in commenting on it have strongly insisted that these instances are extremely rare."

The signs of the death of the fœtus during delivery.—In this case many of the former signs will apply, such as the want of motion with fœtid discharges.

"Writers have also mentioned the state of the presenting part. When the fœtus is dead, it has an œdematous or emphysematous feel—the skin is soft, and easily torn, and the bones of the cranium lose their natural connection, and vacilate on one another. The umbilical cord also, if it can be examined, is found to be withered and rotten. Although these are strong proofs, yet the practitioner should not hastily pronounce on them. The fœtid discharge or odour may be owing to the premature passage of the meconium or to the mixture of a small quantity of blood with the uterine discharge. The former of these was at one time supposed to indicate death with certainty; but it is now ascertained that although it portends danger, yet children have notwithstanding, been born strong and healthy. The state of the skin and bones may be the effect of weakness, as also the looseness of the epidermis. Even its livid colour is not infallible. Vicq D'Azyr mentions a case that occurred at Breslaw, where the arm of the infant protruded from the uterus, and was so cold and livid, that it was deemed gangrenous, and was amputated. Notwithstanding this, the infant was born alive three days after.

"We must recollect also, that the pressure occasioned by a long and tedious delivery, may extinguish life. The proofs now enumerated, indicative of putrefaction, will, in that case, generally be wanting. The motion of the fœtus, which has lately been felt, will suddenly cease, and tumefaction and redness of the presenting part will be observed. Ecchymosis sometimes occurs owing to a rupture of the vessels, and an effusion of blood into the adjacent cellular tissue."

Signs of maturity and immaturity in the child.—Dr. Beck has drawn up a very complete and satisfactory chapter upon this subject from the authorities of Aristotle, Hippocrates, Riolan, Haller, Rœderer, Meckel, Burton, Baudelocque, Wm. Hunter, Burns, Chaussier, Beclard, Capuron, Clarke, Merriman, and Sömmering. During the fifth month the length of the fœtus is from seven to nine inches, and the weight nine or ten ounces. During the sixth month, the weight is from one to two pounds, and the length from nine to twelve inches—the middle of which is at the abdominal extremity of the sternum. At the seventh month, the weight is from two to three pounds; the length from twelve to fourteen inches—the middle of which is nearer to the

sternum than to the navel. At eight months the weight is from three to five pounds, and the length sixteen inches or more—the middle of which is nearer to the navel than to the sternum. At the ninth month the length is about twenty inches, the middle of which is at the navel, or a little below it. The marks of life are:—

"The ability to cry as soon as it reaches the atmospheric air, or shortly thereafter, and also to move its limbs with facility, and more or less strength—the body being of a clear red colour—the mouth, nostrils, eyelids, and ears perfectly open—the bones of the cranium possessing some solidity, and the fontanelles not far apart—the hair, eyebrows, and nails perfectly developed—the free discharge of the urine, or meconium, in a few hours after birth—and finally, the power of swallowing and digesting, indicated by its seizing the nipple, or a finger placed in its mouth."

"The child, on the contrary, is considered immature, when its length and volume are much less than that of an infant at the full time; when it does not move its members, and makes only feeble motions; when it seems unable to suck, and has to be fed artificially; when its skin is of an intense red colour, and traversed by numerous bluish vessels; when the head is covered with down, and the nails are not formed; when the bones of the head are soft, and the fontanelles widely separated; the eyelids, mouth, and nostrils closed; when the membrana pupillaris is still present; when it sleeps continually, and an artificial heat is necessary to preserve it, and when it discharges its urine and the meconium imperfectly."

"In the evidence on Bailey's divorce bill in the House of Lords, March 10, 1817, the point in dispute was, whether Mr. Bailey's child was full grown at its birth. The nurse swore, that it cried with a loud voice, and was fed three times in the course of the day when it was born. Dr. Gardiner, the attending physician, corroborated the testimony of the nurse, as to the full growth of the child. Dr. Merriman was then called in, and examined as to the consequences of a premature birth on the offspring. He said, he had known a child born in 6 months and 18 days live to grow up, but never to become stout. A child born under such circumstances would be smaller than usual, the skin would be redder, and the face not so completely formed. As far as his experience went, he should conclude that it could not cry strongly, and would be oppressed by difficult respiration. The perfect conformation of the nails, strong voice, and usual size, were proofs of a full grown child."

State of an infant capable of inheriting.—With respect to the period of gestation after which a child is considered capable of living, it seems to be considered a general rule, that five months, or one hundred and fifty days, are deemed indispensable. Capuron, however, mentions one Fortunio Liceti, said to have been born at four months and a half, who lived to the age of eighty. Dr. Rodman, of Paisley, also mentions the case of an

infant surviving, where the mother, who had previously born five children, was confident that the period of gestation was less than nineteen weeks. This child, however, was of the length and weight of a six or seven months fœtus. Such cases, indeed, are very doubtful, and ought not to be founded upon. Even at seven months, the chance of surviving six hours after birth is much against the child.

The other subjects introduced by Dr. Beck in this part are not so much of medical as legal interest. The subject of infanticide which follows, has repeatedly come under our notice lately, and as we do not observe that Dr. Beck (who is indebted to his brother, Dr. John B. Beck, for the chapter) has done more than give what is already known, though he has given it admirably, we shall not do more than mention briefly one or two of the topics. It is but justice to Dr. G. Smith, to say that his article on the subject, though short, is excellent, for which see our extracts, pages 238-240, above.

Infanticide.—The following is an account of an experiment made by Dr. J. B. Beck, with a view to settle the disputed point about the floating or sinking of the lungs in water after or before respiration.

"Twenty-four hours after delivery, I was favoured by a medical friend with the thoracic viscera of an infant, which had been still born, after a very difficult and protracted labour. On putting them into a vessel of water, the heart, lungs, thymus, gland, &c. were found readily to sink to the bottom, both conjointly and when separated, no symptoms of putrefaction were discernible. August 20, 9 o'clock, *a. m.* This being the third day after delivery, I separated the two lobes of the lungs, and placed them in a vessel of pure rain water, exposed to the rays of an intense sun, both lobes being at the bottom of the water: 2 *p. m.* both lobes floating. Here and there an air bubble visible on their surface. Odour very offensive: 7 *p. m.* left lobe sunk: right still floating. August 21, 9 *a. m.* both lobes sunk: 2 *p. m.* both floating: 7 *p. m.* both floating. August 22, both floating all day. August 23, 9 *a. m* both floating; covered with air bubbles. On taking out one of the lobes, with a view of cutting off a portion of it, I found it so far dissolved as to render it impracticable. On returning it to the water it immediately sunk: 2 *p. m.* the lung which sunk this morning again floating. Both now float, and are horribly offensive. August 24, 9 *a. m.* the lungs which were taken out yesterday, sunk again; the other still floating. August the 30th, no change has taken place in the situation of the lungs since the 24th. Finding the water nearly evaporated, I filled the vessel very cautiously with fresh rain water, upon which the floating lung sunk instantly. August 31, both lungs still sunk, and never afterwards showed any disposition to float, although suffered to stand for better than five weeks. If it should be objected

to these experiments, that they are not satisfactory, because the lungs were separated from the rest of the body, it will obviate every difficulty to state a case in which the same result was observed in lungs which had not been taken out of the chest, until after they had become putrid. A case of this kind is related, in which the child was certainly born dead. It had already become putrid when it was dissected—its vessels were full of air, and vesicles distended with it were seen on the surface of the lungs. On putting the lungs into water they floated.

From the foregoing experiments it thus appears, that in the *incipient* stage of putrefaction, lungs that have never respired will float in water; whereas they will sink if it has continued long enough to completely destroy their organization, and thus extract all the air contained in them. These results have been corroborated by numerous other observations and experiments, and their truth cannot be doubted. It seems singular, indeed, that they should ever have been questioned, when a case perfectly analogous is witnessed in every person that is drowned. The body at first sinks; afterwards rises to the surface, when putrefaction has generated air sufficient to render it specifically lighter than water; and finally descends again, upon the extrication of that air."

We add the following experiments also by Dr. J. B. Beck, undertaken to satisfy himself of the correctness of Ploucquet's test. On a doubtful point like this, we cannot have too many facts.

"*Exp.* 1. New York, April 5, 1821, I was requested by the coroner to examine a male child, which had been found dead, exposed in one of our streets. From the size and appearance of the child, and from a variety of concurring observations upon the lungs and other parts of the body, no doubt remained that the child had been born alive, and had performed complete and perfect respiration. In this case, the relative weight of the lungs and body was as 1 to $35\frac{9}{17}$."

"*Exp.* 2. Feb. 2, 1822. A female child, found exposed in Anthony-street, was examined by Dr. Dyckman and myself, in the presence of the coroner. The child had evidently respired. In this case, the proportion of the lungs to the body was as 1 to $37\frac{1}{2}$."

"*Exp.* 3. June 26, 1821. Examined a child which had been found in a sink—appeared to be of full size. The whole body was in a state of putrefaction; the lungs were also found in a similar condition. After a very careful and minute examination, I satisfied myself that the child had *not* been born alive. The proportion here between the weight of the lungs and the body was as 1 to $46\frac{1}{3}$."

"*Exp.* 4. May 7, 1822. Dr. J. W. Francis requested me to inspect with him a fœtus, the delivery of which he had attended three or four days previously. It had reached about the fifth month, and was judged to have been dead in the uterus about six days before delivery, owing to an accident which had happened to the mother.

The fœtus was at present in a state of incipient decomposition; the lungs, however, were perfectly sound. The proportion between the weight of the lungs and the body was as 1 to 29."

"*Exp.* 5. Oct. 18, 1822. Another case, similar to the preceding, was examined by Dr. Francis and myself. The child was born between the fifth and sixth month, in a state of decomposition. The lungs were perfectly sound. The proportion between the lungs and the body was as 1 to $39\frac{5}{7}$."

"The two first of the cases just detailed, certainly go to support the correctness of Ploucquet's test. The approximation is unquestionably as near as the nature of the case is capable of. The three last seem to prove that putrefaction does effect a material change in the relative weight of the lungs and body."—Vol. i. p. 255.

On procuring Abortion.—This interesting subject Dr. J. B. Beck has introduced into this very learned and complete chapter on infanticide, and he has treated it more copiously than Dr. Paris. We have formerly extracted some excellent remarks on criminal abortion, by Dr. G. Smith. We cannot too strongly impress on our readers the remark of Dr. J. B. Beck, that even in unmarried females abortion is not always to be associated with crime and disgrace, and may often arise from natural causes, or accidental causes, beyond the controul of the female. This consideration should teach medical men to decide in such cases with great caution. Dr. J. B. Beck agrees with the general opinion, that all the criminal means usually resorted to are extremely uncertain.

"Dr. Rush, in speaking of the effects of purging and *bleeding* in the yellow fever of 1793, asserts, that not one pregnant woman to whom he prescribed them died, or suffered abortion. In his defence of blood-letting, the same writer gives us the account of one woman whom he bled eleven times in seven days, during her pregnancy—of another, who was bled thirteen times, and of a third, who was bled sixteen times, while in the same condition. All these women, he adds, recovered, and the children they carried during their illness were born alive and in good health. The foregoing facts, selected from a multitude of similar character, are abundantly sufficient to show the extent to which venesection may be carried during pregnancy, without being attended with any injurious consequences to the fœtus; and the effect must be the same, from whatever part of the body the blood may be drawn, whether from the arm or the foot. Still it is not to be denied, that when the constitution of the mother is naturally feeble and irritable, or has become much debilitated by disease, an injudicious loss of blood during pregnancy may prove fatal to the life of the fœtus. In all cases, therefore, of this kind, every attendant circumstance should be duly considered, for the purpose of ascertaining the intention of the person who recommended it.

"With regard to the use of ordinary cathartic medicines, during

pregnancy, it is well ascertained that they may be carried to a great extent, without being followed by any injurious consequences, either to the mother or the fœtus. During the yellow fever of 1793, Dr. Rush informs us, that he gave large and repeated purges of calomel and jalap to many women in every stage of pregnancy, and in no case did any injury ensue to the child. Nay, he adds, that out of a great number of pregnant women, whom he attended in this fever, he "did not lose one to whom he gave this medicine, nor did any of them suffer an abortion. One of them had twice miscarried in the course of the two or three last years of her life. She bore a healthy child three months after her recovery from the yellow fever."

"Concerning oil of juniper, Foderè relates the following fact, which shews that this powerful article has failed in effecting an abortion:—A pregnant female took every morning, for twenty days, 100 drops of the distilled oil of juniper, without injury, and was delivered of a living child at the expiration of the ordinary term."

"*Juniperus-sabina.*—Savine. If given in sufficient large doses, this is a powerful poison. In the experiments made by Orfila on this article, it was found, in one instance, to destroy a dog in sixteen hours, and in another thirteen hours after it was administered. In the case of Miss Burns, for whose murder Mr. Angus was tried at Lancaster, in 1808, there is reason to believe, from the testimony offered, that savine oil had been administered to effect abortion. That it does not always succeed is evident from a case related by Foderè. In 1790, a poor imbecile and cachectic girl, in the duchy of Aoust, in the seventh month of her pregnancy, took from the hands of her seducer a glass of wine, in which there was mixed a large dose of powdered savine. She became so ill, that a report of it was made to the magistrate, who ordered Foderè to visit her. The patient stated to him, that on taking the drug she had felt a burning heat, accompanied with hiccup and vomiting. This was followed by a violent fever, which continued for fifteen days. By the proper use of refrigerants, however, she recovered, and at the end of two months was safely delivered of a healthy child.

"It has happened in some instances, that while the mother has lost her life in attempting to procure a miscarriage, the child has actually been born alive and survived. A case of this kind was witnessed by Foderè, in 1791. A cook, finding herself pregnant, and not being longer able to conceal it, obtained half an ounce of powdered cantharides, and mixed it with an ounce of sulphate of magnesia, and took them down in order to produce abortion. Some hours after, she was seized with violent colic, and brought forth a *living child*, in the most horrible pains. During the succeeding night she died. If these facts were more generally known, I suspect the attempts at abortion would be much less frequent than at present. With regard to the accessaries and accomplices in this crime, it would be well for them to remember, that in every experiment

of this kind which they make, they take upon themselves the awful responsibility of jeopardizing not merely a single life, but two lives. As far as *intention* is concerned, they are in all cases as much chargeable with the death of the mother, as with the destruction of the fruit of the womb.

"It results therefore, from what has been said concerning the means of producing abortion, 1st, That all of them are *uncertain* in their operation upon the fœtus; 2d, That they always endanger the life of the mother; and 3d, That they sometimes destroy the mother, without affecting the fœtus."

Legitimacy.—The chief topic of interest under this head is the limits of protracted gestation, about which so many strange and doubtful stories are told. We shall pass over the case mentioned by Pliny the naturalist, whose authority is upon a par with that of the credulous Buffon, and several other cases of an equally extraordinary kind, and content ourselves with a case which enlisted all the medical talent of France in its discussion.

"Charles ——, aged upwards of 72 years, married Renée, aged about 30 years, at the commencement of the year 1759. They were married nearly four years without having any issue. On the 7th October, 1762, he was taken ill with a fever and violent oppression, which remained until his death. The last symptom was so severe, that he was forced to sit in his bed, nor could he move without assistance. In addition to these, he was seized with a dry gangrene of the leg on the 21st, and with this accumulation of disease, he gradually sunk, and died on the 17th of November, aged 76 years. Renée had not slept in the chamber during his illness; but about three and a half months after his death, she suggested that she was pregnant; and on the 3d of October, 1763 (within four days of a year since the illness of her husband, and ten months and 17 days after his death), she was delivered of a healthy, well-formed, and full sized child. The opinion of Louis was asked on this case, and he declared that the offspring was illegitimate. Had he rested at this, even the advocates of protracted gestation might probably have murmured, as the circumstances were rather too powerful for the interposition of their favourite doctrines. But he took occasion in his consultation to attack the opinion generally, and to deny the possibility of the occurrence of such cases. Among the arguments which he adduces, are the following: that the laws of nature on this subject are immutable—that the fœtus, at a fixed period, has received all the nourishment of which it is susceptible from the mother, and becomes, as it were, a foreign body—that married females are very liable to error in their calculations—that the decision of tribunals in favour of protracted gestation, cannot overturn a physical law—and, finally, that the virtue of females, is in these cases, a very uncertain guide for legal decisions. "If we admit," says he, "all the facts reported by ancient and modern authors, of delivery from eleven to

twenty-three months, it will be very commodious for females; and if so great a latitude is allowed for the production of posthumous heirs, the collateral ones may in all cases abandon their hopes, unless sterility be actually present."

Dr. Beck thinks that this reasoning carries with it great weight, and it is partly confirmed by the judicious and experienced remarks of Professor Mahon.

Presumption of Survivorship.—This is an intricate, and in some instances of property by inheritance, an intensely interesting subject. We think it will be enough to give two cases from our author, illustrative of the doctrines disputed

Survivorship of Mother and Child.—"A female, at the eighth month of pregnancy, died of a disease which the physicians styled anasarca complicated with scurvy, *(anasarque compliquèe de scorbut.)* A surgeon immediately performed the Cæsarean operation, and extracted the child. In his *procés verbal* he states, that after tying the umbilical cord, and removing the mucus from its mouth, he observed pulsations at the region of the heart, and also found that it preserved a sufficient degree of warmth. It expired, however, (he adds) three-quarters of an hour after the decease of its mother. Six witnesses were also present at the operation, four of whom stated that they applied their hands to the breast and felt the pulsation. The other two had not observed it.

"Pelletan was desired to examine this testimony, and to give an opinion whether the child had actually survived its mother. He remarks that there are certain causes of death which may destroy the mother, while the life of the infant may be preserved; of this nature, are sudden accidents, as drowning, a blow on the head, or violent hemorrhage. Fœtal life is even compatible, with some inflammatory complaints, but the probability is certainly against the surviving of the child, when the mother dies from a lingering and wasting disease. For this reason, and also because it does not appear to have arrived at the full time, he was of opinion that the child had died in the womb. As to the signs of life, even if they were fully substantiated to have been present, he conceives them equivocal. The heat and pulsation were probably the remains of fœtal existence. And the surgeon, if correct in believing that the heart beat for three-quarters of an hour, was certainly blameable in not using means to promote respiration. But the probability is that he was deceived. For these reasons, Pelletan gave it as his opinion that the mother survived the child.

Survivorship in Persons destroyed by Accident.—"Ricard, a celebrated advocate of the seventeenth century, has preserved a very curious case on this subject. In 1658, a father and son perished in the famous battle of Dunes; and at noon the same day, the daughter and sister became a nun, whereby she was dead in law. It was inquired which of these three survived, and it was decided that the nun died first. Her vows being voluntary, were consummated in a

moment; whereas the death of the father and brother being violent, there was a possibility of their living after receiving their wounds. It was then necessary to decide between them, and after some disputation, it was agreed to follow the Roman law, and to declare, that the son being arrived at the age of puberty, survived the father."

Age and Identity.—These sometimes give rise to very nice and curious medical investigations, and it is therefore requisite that medical men should be well informed on points of this nature, on which they may be called to give evidence. The English law for example, fixes a certain age for puberty, though it omits to fix a period, beyond which the having of offspring may be considered impossible. The following case of doubts concerning identity is curious and important:—

"The Sieur de Caille, being a protestant, fled to Savoy, at the period of the revocation of the edict of Nantes. His son died before his eyes at Vevay. Some years after, an impostor pretended that he was the son of this person, and claimed the succession to his property. He was imprisoned, and his cause remained before the parliament of Aix for seven years. Hundreds of witnesses (among whom were nurses and domestics of the family,) swore that he was the son of De Caille, and the public sentiment was strongly in his favour, as he was a catholic. Testimonials, sent from Switzerland, that the real son was dead, were of no avail, and the parliament declared in 1706, that he was what he claimed to be. The wife of the impostor shortly after discovered, that although she had been silent, yet his elevation would not profit her; she therefore began to mention who he actually was, and on appeal, the cause was transferred to the parliament of Paris. The evidence adduced showed that the late son of De Caille had some distinguishing peculiarities in shape and make. He was of a small make, and his knees approached each other very closely in walking. A long head, light chesnut hair, blue eyes, aquiline nose, fair complexion, and a high colour, were his other characteristics. The stature of the impostor (Pierre Megé, a soldier) was, on the contrary, five feet six inches, and his black hair, brown and thin complexion, flat nose, and round head, sufficiently distinguished him from the former individual. Other physical conformations were observed, which it is not necessary to mention, but which strengthened the testimony against Megé. The parliament accordingly decided that he was an impostor."

Mental Alienation.—Dr. Beck has investigated this important subject with some minuteness and accuracy, which we have already seen, are his qualities as a writer. He divides it into six parts: the symptoms that constitute a state of insanity; feigned and concealed insanity; the legal definition of a state of mental alienation, and the adjudications under it; inferior degrees of diseased mind; the state of mind necessary to constitute a valid will; the capacity and the morality of the actions of the

deaf and dumb. We cannot of course enter into all the details of each of those divisions, but we shall, as in the preceding parts, select what appears to be most interesting.

Symptoms of Insanity.—The division of the various states and degrees of insanity, laid down by Esquirol, is perhaps the best and most distinct, namely, Mania, in which there is hallucination accompanied by excitement, extending to many objects; Monomania or melancholy, centering in one or few objects; Dementia, or incapability of reasoning arising after birth; and Idiotism congenital.

Mania.—"The appearance of the eye is the circumstance most readily to be noticed, and the change in it from a state of health even precedes incoherence of language. Recovered patients have described a peculiar sensation connected with this appearance, as though the eye flashed fire from being stricken smartly with an open hand, and this increased, in proportion as the ideas became more and more confused. There is a peculiar muscular action of these organs, a protrusion of the eyes, a wandering motion in every possible direction, and in a manner peculiarly tiresome to the beholder. During a paroxysm, they appear as if stiffly and firmly pushed forward, and the pupils are contracted; and yet with all these appearances of excitement, it has rather a dull than a fierce look. The muscles of the face also partake in the change, and the rapidity of the alterations they undergo, depends on the succession of ideas which pass with such velocity through the mind of the sufferer.

"As the attack advances, the individual becomes uneasy, is unable to confine his attention, walks with a quick and hurried step, and while doing so suddenly stops. Men of the most regular and established habits, will suddenly become active, jealous, and restless; they abandon their business, and enter into the most extravagant undertakings, while, on the other hand, some who naturally are of a lively disposition become indolent and indifferent, fancy themselves sick, or have a presentiment of severe disease. Persons subject to habitual indisposition, which has disappeared suddenly, fancy themselves in high health, and are greatly elated.—The language is totally different both in tone and manner from the usual habits of the maniac. He becomes angry without any assignable cause—attempts to perform feats of strength or efforts of agility, which shall strike the beholder with astonishment at his great powers. Many talk incessantly, sometimes in the most boisterous manner, then suddenly lowering the tone, speak softly and whisper. The subjects vary equally. They are never confined long to one point, but voluble and incoherent. The same phrase is sometimes repeated for a length of time."

Monomania, or Melancholy.—Those who are affected with this species often appear quite rational, on all subjects unconnected with the predominant hallucination.

"Some are gay and highly excited—laugh, talk, and sing—fancy themselves deities, kings, learned, and noble. Cases of this nature must be familiar to every reader. Foderè mentions one which is strikingly illustrative. A merchant at Marseilles, aged 70, and always a decided royalist, had devoted himself to heraldic researches. He was so overjoyed at the return of the Bourbons to France, that he became insane. His predominant mania was to recite, with a loud voice, the history of the kings of France, and to fatigue his auditors with a tedious catalogue of chronological facts. If they listened with patience, he was contented and calm, but if any impatience was manifested his fury became ungovernable.

"Melancholy is a disease of mature age, and rarely affects young and athletic persons. It is also generally characterized by a peculiar appearance, and particularly by black hair and eyes—by a striking cast of countenance, as the complexion is either yellow, brown, or blackish. The physiognomy is wrinkled and languid, yet sometimes the muscles of the face become convulsively tense, and the countenance is full of fire."

Dementia.—Those who labour under this form of insanity are generally calm and quiet, though occasionally short periods of fury supervene. They sleep much, enjoy a good appetite, and are apt, if neglected, to become slovenly and dirty in their appearance. Esquirol mentions a case, which will give a general idea of this class in its usual form. The patient was a female, aged 70, who, after having passed several years in a state of furious mania, at last fell into dementia. The hallucination of this individual corresponds with her advanced age, and the long duration of the complaint. She preserves a few ideas, which still savour of pride. She believes herself the daughter of Louis XVI., but otherwise there is no coherence; no memory of recent transactions; no hopes or fears, desires or aversions. She is calm, peaceable; sleeps well, eats with voracity, and appears perfectly happy. The ideas of patients, although few and isolated, sometimes pass in rapid or alternate succession; and this gives rise to incessant babbling, unwearied declamation, and continual activity, without object or design. Occasionally they assume a menacing air, without any real anger, and this is soon succeeded by immoderate laughter.

Idiotism.—"Individuals labouring under congenital idiotism, are marked by some striking characters. At its commencement, it is indicated both by feebleness of body and feebleness of mind. The skull is smaller and inferior in height to the skull of maniacs, and there is a great disproportion between the face and head, the former being much larger than the latter. The countenance is vacant and destitute of meaning, the complexion sickly, the stature usually diminutive, the lips and eyelids coarse and prominent, the skin wrinkled and pendulous, and the muscles loose and flabby. To

these are usually added a complication of other diseases. The subjects are ricketty, scrofulous, or epileptic. The eyes are squinting, or convulsive, and the hearing is imperfect or totally destroyed."

In Mr. Hobhouse's Travels in Albania, is the profile of a female idiot, who was only three feet and a half in height. She constantly sat, rolled up as it were, upon a truss of straw; was quite dumb, nearly deaf, and possessed of no one consciousness of humanity. She would hop towards her keeper, on being loudly called by her name.

Feigned and concealed Insanity.—No disease is more easily feigned, or more difficult to detect, than mental aberration. It is most commonly feigned, for the purpose of escaping punishment due to crime, and consequently the responsibility of the medical examiner is great. It is his duty, and should be his privilege, to spend several days in the examination of a lunatic, before he pronounces a decided opinion. If this be allowed him, and also if he be enabled to obtain a complete history of the antecedent circumstances, much may be effected towards forming a correct opinion. The following case is from Dr. Rush :—

"Two men were condemned to die in 1794, for treason, committed against the general government in the western counties of Pennsylvania. One of these was said to have become insane after sentence of death was pronounced on him. A physician was consulted upon his case, who declared the madness to be feigned. Gen. Washington, the President of the United States, directed a consultation of physicians, and Drs. Shippen, Rush, and S. P. Griffiths, were appointed for that purpose. The man spoke so coherently upon several subjects, that for a while the state of his mind appeared doubtful. Dr. Rush suggested the propriety of examining his pulse. It was more frequent by twenty strokes in a minute, than in the healthy state of the body and mind. Dr. Shippen, ascribed this to fear, but when the pulse of his companion was examined, although equally exposed to capital punishment, it was found perfectly natural both in frequency and force. This discovery induced the physicians to unite in a certificate, that the individual was really mad. He was respited and subsequently pardoned."

This disease is observed to be concealed in the hope of escaping the restraints of confinement; and the difficulty of detection is increased by the remarkable cunning and dissimulation of which some maniacs are capable. The following striking instance was given by Lord Erskine in his celebrated speech for James Hadfield :—

"I examined," says he, "for the greater part of the day, in this very place, (the Court of King's Bench) an unfortunate gentleman who had indicted a most affectionate brother, together with the keeper of a mad-house, at Hoxton, for having imprisoned him as a

lunatic, while, according to his own evidence, he was in his perfect senses. I was, unfortunately, not instructed in what his lunacy consisted, although my instructions left me no doubt of the fact, but not having the clue, he completely foiled me in every attempt to expose his infirmity. You may believe that I left no means unemployed, which court experience dictated, but without the smallest effect. The day was wasted, and the prosecutor, by the most affecting history of unmerited suffering, appeared to the judge and jury, and to a humane English audience, as the victim of the most wanton oppression; at last Dr. Sims came into court, who had been prevented by business from an earlier attendance. From him I soon learned that the very man, whom I had been above an hour examining, and with every possible effort which counsel are so much in the habit of exerting, believed himself to be the Lord and Saviour of mankind, not merely at the time of his confinement, which was alone necessary for my defence, but during the whole time he had been triumphing over every attempt to surprise him, in the concealment of his disease. I then affected to lament the indecency of my ignorant examination—when he expressed his forgiveness, and said with the utmost gravity, and emphasis, in the face of the whole court, "I am the Christ;" and so the cause ended."

Definition of Mental Alienation.—We think it unnecessary to enter into the metaphysical niceties which have been so often said and written on this point, for little that is definite or practical has as yet been determined on by jurists; and till something more useful be advanced on the subject, we shall refer our readers to what we have said of Dr. Haslam's pamphlet, Vol. V. page 474.

We have thus finished our analysis of one volume of this interesting work, and must, with regret, leave the other for the present; though we shall not lose sight of it, and shall often refer to it in our subsequent Numbers, perhaps, make another analytical article from it.

ARTICLE II. *De la Medicine Operatoire, par R. B. Sabatier. Nouvelle Edition, faite sous les Yeux de M. le* BARON DUPUYTREN, par L. J. SANSON, et L. B. BEGIN. 4 tom. 8vo. Paris, 1822, 24.

We have often thought it our duty to point out, what appears to us, deficiencies in the medical literature of our own country; so often indeed, that probably to many of our readers

we must have seemed hypercritical and unnecessarily fastidious. To those who think so, and who are not so sensible of the deficiencies as we profess ourselves to be, it would be in vain to offer a defence on any occasion, much less on the present one as we are about to render ourselves again liable to the same reproaches that may have been formerly bestowed upon us. In a word, we are compelled to state the mortifying truth, that we are not in possession of any work, of the same nature, which will bear a comparison with Sabatier's celebrated Treatise, even in its original form; that we have not any work that can prove a satisfactory guide to the young surgeon, in planning his operations; in choosing the kind best adapted to the varying conditions of individual cases; in carrying them into execution; in conducting the after treatment; and in the important, but neglected point of establishing the indications calling for their performance.

Mr. Averill's excellent little book lately published, has supplied the student with descriptions of the most approved methods of performing operations; but, not to mention that he has confessedly derived his information from the French, and that many parts of his book are translations of that before us; what we have just said, and what every surgeon must feel, will serve to prove how limited in its utility, a treatise formed on such a plan must be. Although written at so remote a period, Mr. Sharpe's "Operations of Surgery," approach most nearly of any thing in our language, to the desideratum.

Have we then overlooked Mr. Bell's Operative Surgery? No; but from what cause we know not; whether from a distrust of the extent of that gentleman's experience at the time it was written, a distrust heightened by his giving graphic representations and plans, which could evidently only exist in imagination; or whether from the aversion naturally excited by his extreme egotism, and his extravagant claims to exclusive excellence—it has always appeared to us a work of very inferior execution; and in saying so, we believe we express the opinion of a majority of the profession. As we have no wish to detract from real merit, it is fair to add, that Mr. Bell's qualifications for the task at present, are not to be estimated by his imperfect performance of it at a distant period: his egotism may probably remain in statu quo, or it may have retrograded; but we make not the least doubt, that with the experience and information he has since acquired, Mr. Bell would himself be the first to feel the necessity of making his book assume a character in many respects different from that it now bears.—It must be allowed to be rather surprising, that among the many able surgeons in public situations in London,

and who have not yet experienced the benumbing influence of age, not one should have availed himself of the opportunity of appropriating such a field for active exertions, and that too without the fear of being disturbed by competitors.

But it is time to say something of the present edition of Sabatier, which may in many respects be looked upon as a new production: its history is told in a few words, namely, an attempt to bring an established and approved work to a level with the progress of modern surgery, executed by two gentlemen, whose names are not altogether unknown, but deriving its principal merit from the picture it presents of the opinions and practice of M. Dupuytren, certainly one of the most scientific and expert surgeons of Europe. We shall not stop to enquire if this be in fact the best mode of proceeding, or if the mixture of new and old doctrines do not give a motley appearance to the whole; but shall take it as we find it.

Of a systematic work it is by no means easy, nor is it always useful, to give a complete analysis, and we shall therefore, as on former occasions, use considerable freedom in selecting for notice such points as are most likely to prove of general interest. A good deal of new matter has been added to the present edition, occupying the greater part of the first volume, under the title of Prolegomena; and treating in succession, of the qualities requisite in an operator; general considerations on operations; the processes preliminary to operations; the mode of conducting them; the after treatment; dressings; the *hygiene* (a term for which we do not know a precise equivalent in our language) of those operated on; and, lastly, the minor operations. Most of these subjects are treated with a degree of scrupulous minuteness, in some instances approaching to superfluity. We may point out, as particularly excellent, the chapters on the preparations for operations; on the mode of conducting them; on dressings; and on the minor operation: that devoted to the indication of the qualities requisite in an operator is also excellent, though written in a spirit of Utopian speculation, of which we do not want for examples in our own country*. But it is better that it should be so; it is an error on the right side; and by placing the qualification at a higher standard than can be generally arrived at, the student who fails to accomplish impossibilities, is at least stimulated in the most effectual manner to energetic exertion. The whole of this preliminary essay well deserves an attentive study from every surgeon who aspires to the character of an operator, and we think that a translation of it, with the

* See the Transactions of the Associated Apothecaries.

changes and modifications adapted to English opinions and practice, would be a valuable addition to our professional literature. We shall proceed to give some extracts from various parts of the work.

Hemorrhage during operations.—"Two methods have been proposed, when the blood springs from several arteries of moderate size, and when its current cannot be checked by compression. The first consists in preventing the flow of blood, by the fingers of intelligent assistants placed on the orifices of the vessels, until more effectual measures can be adopted, after the conclusion of the operation. The second, in securing the vessels as they are divided. J. L. Petit suggested the former, and applied it so successfully, that it was adopted by most of his contemporaries. It has this advantage, that the operation may be executed more rapidly; but it has also considerable inconveniences. The operator must trust wholly to his assistants, their fingers incommode him; and what is most important, after the operation, the vessels cannot be detected; they have retracted, or contracted, and no blood escapes; but after some hours, when irritation has caused an afflux of fluids to the wound, secondary hemorrhage, an occurrence always unfavourable to the result of the operation, and often fatal to the patient, appears, obliging the surgeon to remove the dressings and apply the ligature."

"These inconveniences have, for the last 15 or 20 years, led surgeons, particularly the English, to prefer the second of these two methods. In this way, the duration of the operation, it is true, is prolonged; an evil, however, of slight importance, compared with secondary hemorrhage. Besides this proceeding does not augment the sufferings of the patient; the operator, indeed, loses an opportunity of displaying his dexterity, from the length of time required to effect his object, but the case is one of those in which brilliancy must be sacrificed to security, and with some very rare exceptions, good practice requires that bleeding arteries should be tied the moment they are divided."—Vol. i. p. 77.-8.-9.

Burns.—The Editors have made an addition of considerable extent, when treating of burns, for the purpose of explaining the doctrines of M. Dupuytren, in relation to their treatment, &c.

"M. Dupuytren admits six different degrees, or forms, in burns, on the principle that in such cases the cause of injury acts first upon the skin, and successively on the parts more distant from the surface. The first degree, rubefaction; the second, vessication; the third, sloughing of the rete mucosum of the skin; the fourth, sloughing of the whole thickness of the skin; the fifth, sloughing of the muscles, tendons, and deep-seated parts; the sixth, the total combustion and destruction of any individual part. According to the extent in which it exists, any one of these degrees may produce an affection either wholly local, or exerting an influence over the whole system. In some cases, and those the most dangerous, a state of perfect stupor occurs; more frequently there appear acute

fever, vomiting, constipation, convulsions, &c.; at other times the patient becomes hectic, suffering from diarrhœa, and all the other symptoms of consumption. Dissection affords proof that the greater part of these phenomena is to be attributed to the existence of considerable sympathetic irritation of the mucous membrane of the stomach and intestines. The traces of this irritation, however, always presenting a relation to the symptoms existing during life, vary according to the period at which they are observed. Thus, when the individual has perished in the flames, or within a short period of time afterwards, a sufficient interval not having elapsed for the developement of inflammation, we only find traces of considerable afflux to the mucous membrane; it is not only injected and gorged with blood, but also a certain quantity of that fluid has been exhaled from its surface; the general disturbance is often so great, that the same changes may be observed in the bronchial mucous membrane, and it is not uncommon to find effusion of bloody serum within the arachnoid, pleuræ, and all the other serous membranes. If some days have passed since the occurrence of the accident; if nausea, vomiting, fever, &c., have announced the developement of internal inflammation, dissection will display more marked characters of gastro-enteritis. If, in the last place, the patient should happen not to perish until a yet more distant period, and if the symptoms of colliquation have shewn themselves, we shall find the intestinal canal generally discoloured, presenting patches of a more or less brightened colour, and with or without the additions of ulcerations, indurations of the mesenteric glands, &c."—Vol. i. pp. 416-17-18, &c.

Prognosis of Burns.—In relation to the prognosis, the Editors state that

"Burns in the first degree may cause death at once, or in a few minutes, if they be very extensive; but after the first or second day, all danger ceases, because resolution takes place in the injured parts before the time necessary for the establishment of gastro-enteritis. In the second degree, the danger of internal inflammation is more imminent and lasts for a greater length of time, particularly when the phlyctenæ have been lacerated. The third exposes the patient not only to the danger of an inevitable gastro-enteritis, in the first place, but also to a second series of accidents dependent on the establishment of what M. Dupuytren calls the eliminative inflammation, vomiting, fever, &c.; in short, consecutive gastro-enteritis; and other disorders resulting from the exquisite sensibility of the part affected, as convulsions, tetanus, &c.

"The fourth, fifth, and sixth degrees present phenomena of another description: the irritation and pain last only so long as the cause continues to operate, but when this is removed they disappear. Sometimes the patients fall into a complete state of stupor; they become icy cold, and perish within the first few hours after the accident. At other times, when the injury is less severe or extensive, re-action takes place; animal heat is restored; but yet they sink,

at some time, between the fifth and the ninth day, during the establishment of the eliminatory inflammation; in others again, death is the consequence of excessive suppuration, or of hospital gangrene, or of malignant fevers of various kinds, or of marasmus and exhaustion, produced by the duration of the injury, and the impossibility of bringing about the restoration of the loss of substance. Hence it follows, that in extensive burns, which often include all the degrees we have mentioned, the life of the patient is endangered at four different periods: to these M. Dupuytren gives the appellation of period of irritation; period of inflammation; of suppuration; and of exhaustion."—p. 487-8-9.

Deformities from Burns.—After giving general directions for the treatment of burns, the Editors speak of the conduct to be adopted in the cases in which deformity or contraction has been the consequence of an irregular cicatrix. They have given a long list of the deformities which M. Dupuytren has witnessed to result from this cause, some of them of a very singular nature.

"However varied," say they, "may be the aspect of these deformities, they may be reduced to four classes, viz. cicatrices which are too narrow; cicatrices which project; preternatural adhesions, or obliterations; and destruction of organs: the latter are irremediable. The treatment of the others, when they are established, consists in replacing the parts in their natural situation by means of incisions made on certain principles. In these attempts M. Dupuytren has established:—1. That they should not be made until a period of some months, or even years, after the formation of the cicatrix.—2. That an operation should never be undertaken without a certainty of obtaining, by the assistance of bandages or position, a cicatrix less deformed, or more extensive, than the one we wish to correct. This applies, particularly, to scars on the face, which it is seldom proper to interfere with, because of the want of any efficient means of acting upon that part; such attempts often increasing the deformity by making another cicatrix across that which existed before.—3. That the operation should not be performed when it is impossible to restore the parts to their original functions; and consequently, that it should be avoided when joints are anchylosed, tendons and muscles destroyed, &c.

"When we wish to remedy a cicatrix that is too narrow, we must:—1. Make incisions in several points, penetrating through its whole thickness, and dividing it completely across, so as to allow of its ready extension, but without removing any part of its substance: this practice is more consonant to reason and experience than that of some individuals, who thinking that the texture of the cicatrix is always imperfect and ill conditioned, recommend that it should be entirely removed, without recollecting that they thus indefinitely prolong the duration of the complaint, and that it may not always be easy to obtain the formation of a new cicatrix, which must not only supply the place of the textures originally destroyed, but also of that since regenerated.—2. We must extend

the parts, and place them in a position opposite to that into which they have been brought by the disease.—3dly, We must employ great care to prevent the reformation of the cicatrix by the approximation of parts. After the section of the principal bands, and when two or three incisions have sufficed to restore the parts to their natural situation, it is not uncommon for secondary bands to be formed: as they appear, these must be cut without hesitation, not one being left behind. For want of this precaution, operations, apparently well done, have often failed; the secondary bands, having, during the treatment, replaced the primary ones which it was the object of the operation to remove.

When the object is to get rid of projecting cicatrixes, we must:—1. Remove the whole of the projection which they form above the level of the skin, not by cutting them across, but by means of a slender knife with two cutting edges, introduced, horizontally, under the middle part, and carried on just below the skin, so as to detach both ends of the cicatrix.—2. We must keep the edges of the wound separated.—3. And frequently cauterize its surface, so as to keep it constantly a little below the level of the integuments.

"When we intend to destroy preternatural adhesions, we must: 1. Cut or dissect them amply, and beyond their origin. 2. Keep the parts separated afterwards. 3. Compress the part from which the cicatrix is to proceed, and which is always at the angle of union of the parts.

"Lastly, when we wish to remedy the obliteration of some natural opening, we must: 1. Enlarge the opening, if it is only contracted, or perforated it by means of the knife or trocar, if it be completely obliterated. 2. During the formation of the cicatrix introduce tents, &c., of larger calibre than the natural opening, leaving them there, not only until the cure is complete, but long afterwards, because of the very great tendency these openings possess to contract upon the removal of the distending body."—p. 508-9, &c. Vol. i.

We proceed with our notices of some particular subjects, taken in the succession in which they occur in the book: the apparent want of order which may appear in them, is to be attributed to the plan chosen for the arrangement of Sabatier's original materials; the operative processes not being ranked in the common way, according to the parts of the body on which they are performed, but according to the diseases, &c., calling for their employment; the varieties resulting from difference of situation forming the basis of the subdivisions.

Effusions of Bile and Urine.—M. Sabatier remarks on the rare occurrence of effusions of urine and bile in the cavity of the abdomen. The Editors state that,

"This applies only to collections which can be recognised after death, or during life; for, that instances are not uncommon in which communications are found to have been established between the cavity of the peritoneum and the urinary or gall bladders, without

any trace of effusion. M. Dupuytren has explained the cause of this singular phenomenon by experiment. He injected bile, urine, and other coloured and acrid fluids into the abdomen of dogs, from the tunica vaginalis, without opening the peritoneum. Whether these animals were killed immediately after the experiment, or allowed to perish by abdominal inflammation, he found that the fluids, of whatever colour or acridity, had been rapidly absorbed, and that so completely, as not to leave a trace behind, without having failed in exciting acute peritonitis, which proved fatal in a few days, or even hours. These facts prove, that if in the bodies of wounded persons, dying with symptoms of acute peritonitis, we find the gall or urinary bladder opened, so as to allow the possible escape of their contents, we are authorized in considering the peritonitis as the consequence of effusion from them, although there be not any trace of the actual presence of the fluids."

Wounds of Veins.—"A single circumstance," say the Editors, "can render such wounds dangerous: it is when any obstacle opposes the free circulation of the blood in the wounded vessel or its vicinity, whether this obstacle depend on some impediment to respiration, or other circumstances. They give the following case:—A youth of 14 or 15, was running with a knife in his hand, and falling forwards, received a small wound in the upper part of the thigh, near the crural arch, and penetrating one of the great vessels; a great quantity of blood immediately escaped. A surgeon who was called in, endeavoured in vain to suppress the bleeding by making pressure, as well upon, as above the wound: these measures instead of checking, seemed to aggravate the symptoms; at the end of two hours, the patient was taken to the Hotel-Dieu; he was sinking at the time, and died before any thing could be done to relieve him. From the account of the colour of the blood, the manner in which it escaped, the inutility, and even injury of compression, and particularly from the situation of the wound, on the inner side of the course of the femoral artery, M. Dupuytren judged that the vein alone had been wounded. On dissection, in fact, a wound of the anterior side of the vein was found, some lines in length, and about an inch below the crural arch."—Vol. ii. p. 177.

Lachrymal Tumour or Fistula.—After relating some, though not all of the modes of treatment recommended in this disease, (one of the best, that of Ware, is not mentioned,) the Editors speak of that of M. Dupuytren.

"This Professor," say they, "observed that the want of success of the common processes, depends on the short duration of the action of the measures opposed to the complaint. He therefore sought for a plan which might be permanent in its action, and permit the tears to resume their course, which he found in the canulæ introduced into the nasal canal, and allowed to remain there. M. Dupuytren employs the following instruments:—1. A conical gold or silver canula, about 8-10ths of an inch (English) long, longer above than below, having a moderately thick rim at its upper part, slightly curved, in conformity to the shape of the canal, and open-

ing obliquely at the lower end, on the concave side.—2. An iron stilet, large enough to enter the canula, but easily quitting it: its upper extremity provided with a projecting rim, which rests upon the top of the canula, is curved at a right angle, and terminates in a flat handle. M. Dupuytren opens the lachrymal sac by one push of the knife, the point of which is introduced behind the osseous edge of the upper part of the nasal canal; having entered the duct, he raises the blade a little, and introduces along it the point of the stilet with the canula upon it. The knife is then withdrawn, and the stilet gently pushed into the nasal canal, which must be filled by the canula in such a manner, that its projecting rim, concealed in the lachrymal sac, shall not present any obstacle to the healing of the external wound. The stilet is next removed, the canula remaining in the nasal canal. The operation causes little pain; some drops of blood run from the nostril; and if the nose and mouth be closed during forcible expiration, air mixed with blood escapes from the wound. This proves, that the instrument is properly placed, and that a free communication exists between the lachrymal sac and nasal fossa. A patch of plaster covers the wound, which is often healed within 24 hours."—Vol. ii. pp. 252-3.

"A very great number of all ages and sexes have been operated upon in this manner by M. Dupuytren, with most uniform success. He has calculated that of twenty individuals treated in this way, at least sixteen are completely and radically cured, the canula never being displaced; in two others the canula falls into the nasal fossa, or ascends towards the lachrymal sac, so as to render its extraction necessary; but as this does not happen until a considerable time has elapsed, the cure is often not the less perfect, the nasal canal resuming its functions as if it had been dilated by bougies, &c. Lastly, in the remaining two, pain, irritation, and other inflammatory symptoms occur: even then it is rarely necessary to remove the canula; but if it be so, calm is immediately restored, and the patient may be submitted to a repetition of the operation at a future period."—Vol. ii. p. 259-60.

Fistula in Ano.—We are at a loss to understand whence the Editors have derived the grounds on which they assert, in treating of the manner of dressing the wound left after the division of fistula in ano, that "English surgeons have fallen into the same error as Ponteau, by contenting themselves with introducing a piece of lint between the edges of the wound, and removing it at the end of the third or fourth day."—Vol. ii. p. 354. It is unnecessary to say that nothing can be farther from a correct representation of the practice employed in this country: every surgeon is well aware that the perfect cure is only to be effected by insinuating a portion of lint during the whole treatment, between the edges of the wound, so as to ensure its healing progressively from the bottom.

Passing Instruments into the Bladder.—In speaking of the practice of the forcible introduction of instruments into the bladder, occasion is taken to condemn it in pretty strong terms.

"Since the time of Desault," say the Editors, "a great extension has been given to this precept, and to effect the object in view more easily, conical pointed catheters have been constructed. A modern author, more practised in writing than operating, has not scrupled to say, that it is better to make a false passage than to puncture the bladder, not considering that in the latter case, we at least know what we do; whilst in reaching the bladder by a false passage, it is impossible to foresee what course the instrument may take."—Vol. ii. p. 400-1.

Aneurism.—In the third volume, aneurism and the diseases of arteries are treated at great length, and numerous additions are furnished by the Editors, which, however, do not present much novelty in the present state of surgery, being confessedly taken from the works of Hunter, Bell, Scarpa, Hodgson, and the subsequent ones of Beclard, Breschet, and others. They serve, however, to put the great advances of modern science within a very limited period in a very satisfactory light. The following case by M. Dupuytren is in many respects interesting:—

"A woman, aged 66, entered the Hotel-Dieu, in April, 1810, with gangrene at the inner part of the right elbow, œdematous infiltration, and great weakness of the same arm, and a want of pulse on that side. She stated that two months before, she had fallen and suffered much pain in the shoulder; that a surgeon whom she had consulted, had not discovered any fracture or dislocation; that the pain still continuing, she went to a bone setter, who told her that her arm had been dislocated, made violent extension from the wrist and elbow, and assured her she was cured; that from that period her arm had swelled, and that a slough formed at the elbow, where one of the ligatures had been applied. On the 21st day of her residence in the hospital, the patient complained for the first time of a tumour in the axilla on the same side, the date of which she was unable to fix. It was large, raised the pectoral muscle and clavicle, and kept the arm at a distance from the body; it was but little painful, the skin over it was not changed in colour, it did not pulsate, and a deep fluctuation could be discovered. M. Dupuytren, then second surgeon, supposed it might be a chronic abscess, but felt some doubts on account of its situation. For several days the tumour was attentively examined; it made progress; the pain increased, and fluctuation became very distinct. M. Dupuytren decided on opening it, but still doubting, resolved to make only a cautious puncture. He slowly and carefully plunged a long, narrow, and very fine pointed bistoury into its most prominent point; instead of pus, arterial blood escaped along the blade of the knife, which was gently withdrawn, so as not to enlarge the wound; the latter was covered with adhesive plaister, compress, and bandage; it was

resolved to tie the subclavian artery, and this was actually about to be done, when the principal surgeon arrived; he passed his hand under the upper and front part of the bandage, and said that he plainly felt the beating of an aneurism. The bandage was removed, and no one, not even the surgeon himself could discover it. Doubts were again excited of the nature of the tumour, and it was supposed that an artery of moderate size, might have been wounded in the side of an abscess. But ultimately, an indistinct pulsation, accompanied by a motion of dilatation, was discovered in the part of the tumour raising the clavicle; and lower down in the axilla, an obscure rushing like that arising from the passage of the blood into an aneurism. After a time two tumours were distinguished, a small one, situated along and below the clavicle, and pulsating; another very large, fluctuating and presenting the rustling already mentioned. M. Dupuytren proposed the ligature of the subclavian artery at its passage between the scaleni muscles, and executed his mode of effecting it on a subject, in presence of the principal surgeon and a numerous assemblage of students, the surgeon refused his consent, and by that refusal deprived French surgery of the honour of having first performed that operation. Instead of inventors as they might have been. French surgeons on this subject are but the imitators of foreigners."

It is a pity that this pathetic apostrophe, to the sacrificed glory of "la Chirurgie Française," should rest on an unfounded assertion. Not to mention that the principles which led to the daring practice of modern surgery in the treatment of aneurism, emanated almost exclusively from this country, every English surgeon well knows that Mr. Ramsden had tied the subclavian artery at St. Bartholomew's Hospital in November 1809, that is, some months before the occurrence of M. Dupuytren's case; and M.M. Sanson and Begin must or might have known it also, as the case is inserted in Mr. Hodgson's treatise, which has long been translated into French, and which they have quoted on several occasions.

"The treatment of Valsalva was adopted, and one large bleeding was at once performed. For four days the patient was so weak, that it was impossible to repeat it. At the end of that time, some uneasiness having been felt in the tumour, the bandage was removed, and it was discovered that a slough, at least an inch in diameter, had formed. The issue of the case could be no longer doubtful. M. Dupuytren again proposed the operation, and it was again rejected. In the night, two students, who had been placed near the patient, perceived blood rapidly soaking through the apparatus; they removed it, applied a plaster larger than that already there to support the slough, which was detached at one point of its circumference, and stopped the bleeding, before two cupfuls of blood had been lost. The succeeding debility was such, however, that the patient died the next morning. The dissection proved that there

actually were two tumours; one formed by the subclavian artery, dilated in two inches of its length; the other, largest of the two, communicating with it by means of an opening in the artery."—Vol. iii. pp. 131-2, &c.

Excision of Hemorrhoids.—The most serious accident which can take place after the excision of internal or external hemorrhoids, consists in the occurrence of bleeding.

"When the blood escapes externally, its quantity can be easily appreciated, and proper measures taken to restrain its flow. It is not so when the hemorrhage is internal; the patient then experiences a feeling of heat, fulness, and tension in the course of the rectum; he has colic; the pulse becomes weak; the body pale, and covered with a cold sweat; blood is expelled by stool; and death often follows an apparently simple operation within a few hours. The tampoon, and other foreign bodies introduced into the rectum, are generally unsuccessful; they act by distending the lower end of the gut, and for that reason increase the uneasiness of the patient, bring on tenesmus, and are soon expelled by the contraction they excite. M. Dupuytren, struck, on the one hand, with the extreme danger of internal hemorrhage in these cases, and on the other, with the almost invariable inefficacy of the means employed to relieve the accidents it causes, has for some length of time employed a process which has never disappointed his expectations. In consists in cauterizing immediately after the excision of each hemorrhoid, the point from whence any considerable jet of blood proceeds. This is done with an olive shaped iron at a white heat, and does not add much to the pain the patient suffers. If we are not called until some hours after the appearance of bleeding, and if the point from which it proceeds has risen above the anus, the gut must be emptied by injections, and the patient directed to strain; the mucous membrane will then descend, and it will be easy to cauterize the bleeding point. This process is followed by only moderate inflammation, which readily yields to bleeding, leeches, fomentations, &c., and in the majority of cases disappears spontaneously."—Vol. iii. pp. 239-40.

Erectile Tumours.—The Editors state, that M. Dupuytren has long described, in his courses of pathological anatomy, a structure, before unnoticed, and which he calls the erectile tissue. It presents many of the same characters, with a similar structure met with in certain organs, as the penis, clitoris, &c.: these characters are too familiar to require particular notice; the structure in question constitutes nævi materni, and similar deformities. The nature of M. Dupuytren's claims is not very distinctly stated; he certainly cannot be supposed to have discovered the existence of the preternatural erectile structure, nor even to have shewn its relation and similarity to that met with in the natural state of some organs. These are circumstances which have long been generally known. In considering the

treatment, M. Dupuytren states, that the most advisable plan consists in cutting off the supply of blood by the ligature of the principal trunk proceeding to the part affected. Our readers are aware that such an operation has been twice successfully performed on the carotid by Messrs. Travers and Dalrymple, in this country, and once since, in acase, at St. Petersburgh by Dr. Arendt, an account of which will be found in another part of this Journal. M. Dupuytren, however, gives a caution, founded on the event of a case in his own practice, an event which we have often been astonished should not have happened more frequently, when we reflect on the surprising facility with which the course of the blood is restored by anastomosis.

"We must not," say the Editors, "reckon too much on the success of operations of this kind: the destruction or obliteration of the erectile structure, appears to depend on this condition, that the blood, after the ligature of the principal artery shall not be supplied in too great quantity by the anastomosing vessels before the adhesion and consolidation of the areolæ, of which the disease is composed, are accomplished. But if we are to judge from the event of some cases, this result cannot always be easily obtained. A man presented himself at the Hotel Dieu with an erectile tumour developed in the concha of the right ear, and including all the skin and subjacent cellular tissue of that part: the lobe of the ear was three times thicker than natural, of a violet-red colour, and presented an alternate dilatation and subsidence isochronous with the pulse. When compressed it resumed its natural size, but when the pressure was remitted it again became tumid. Pressure on the neighbouring arteries did not at all affect it. Compression of the common carotid was followed by the subsidence and decoloration of the tumour, which resumed its original state when the pressure was remitted. Having ascertained these circumstances, M. Dupuytren decided on tying the right common carotid. The operation did not present any thing remarkable; the tumour quickly subsided, lost its high colour, ceased to pulsate, and every thing promised complete success. These favourable appearances lasted only a few days, after which time the disease returned with nearly the same intensity as before the operation."—Vol. iii. pp. 251-2, &c.

On this account, M. Dupuytren considers excision as the only infallible means of effecting a cure. It is evident, however, that from the situations in which the disease sometimes makes its appearance, the application of that remedy is liable to considerable limitation. M. Dupuytren states that the erectile structure has a very great tendency to re-appear, and on that account it is necessary that in the operations undertaken for its removal, every portion should be carefully removed.

Polypi of the Nose, &c.—It results from the observations of M. Dupuytren, on a great number of cases, that most of the

fleshy polypi, which, originating in the nasal fossæ or the maxillary sinus, make their way by separating or perforating the bones into the orbit, the temporal, and zygomatic fossæ, or even into the cranium, are, in the first instance, of a fibrous nature; and that when they become fungoid, carcinomatous, or bleeding, these degenerations always commence at the part most distant from the pedicle, and when developed in a tuberculated form, shew themselves externally, either at the anterior or posterior openings of the nasal fossæ, or through a perforation of the maxillary sinus. In the extraction of polypi by the forceps, M. Dupuytren states that great advantage is gained by introducing two fingers into the posterior part of the mouth. They support the polypus, prevent it from receding, place it in the grasp of the blades, and spare the patient the fatigue of repeated attempts. When a polypus extends towards the anterior part of the nasal fossa, it stretches and separates the articulations of the bones, but fails in distending the opening in the integuments, which is strengthened by a fibro-cartilage incapable of yielding: the consequence is, that whether the polypus has partially protruded, or still remains within the nose, it is often too large to pass through the fibro-cartilaginous opening. In such cases, M. Dupuytren does not hesitate to make a dilatation by dividing the ala of the nose to a considerable extent, and thus renders the operation of extracting the polypus more easy to accomplish. Large polypi are generally of very irregular figure, being composed of a certain number of divisions, moulded upon, and corresponding to the form of the parts in which they are situated.

"If a polypus," say MM. Beclard and Sabatier, "project at the same time from the anterior and posterior nares; if, after having penetrated the maxillary sinus, it has made its way through the sides of that cavity, it is indubitable that the portion occupying the dilated nasal fossa, that in the maxillary sinus, that which protrudes from the nose, and that which hangs into the pharynx form so many irregular lobes, distinct, and separated by depressions corresponding to the openings through which the tumour has succesively made its way. Hence it is evident, that it would be impossible to extract at once and at one part, a tumour so irregular; and that it must be destroyed in succession and from different directions. In conforming to this precept, however, we must not, like timid and inexperienced practitioners, waste time in pulling away the polypus piecemeal, and in small portions at one time. The tumour must be attacked in its principal divisions, neglecting the minor ones, which are easily removed with the first. Thus in the case above supposed, two operations would generally suffice; one, on the portion of the polypus contained in the maxillary sinus, after having perforated it, or enlarged an opening already existing; the other,

by pulling away the portion in the nasal fossa, with or without dilating the nasal opening to facilitate the application of instruments."—Vol. iii. pp. 276-8.

The greatest danger attending the pulling away of polypi, lies in the possibility of hemorrhage. When the maxillary sinus is laid open, the blood may, in fact, make its escape in three ways at once.

"On that account, M. Dupuytren commences by passing a double thread from the pharynx into the nose, allowing one end to hang out of the nostril, the other out of the mouth; to the latter a plug is attached. Heated irons are prepared, and several balls of charpie powdered with colophany. If hemorrhage happens, an assistant pulls the thread with one hand, and when the plug is thus fixed against the posterior opening of the nares, compresses with the other the end of the nose, whilst the operator stops the bleeding from the sinus either by cautery or by plugging. The apparatus is completed by fixing a plug against the anterior opening of the nostril, and securing it there by tying the ends of the double thread over it."—Vol. iv. pp. 278-9.

Induration of the Tonsils.—Besides the ordinary consequences of this affection, M. Dupuytren has observed in young children a very singular occurrence, viz. a very constant coincidence of the disease with a peculiar deformity of the thorax, which becomes rounded and arched behind, contracted in front, and flattened at the sides. This deformity, M. Dupuytren attributes to the energetic efforts made by the muscles of inspiration to overcome the obstacles opposing the passage of air into the lungs, and it exists so frequently in combination with enlargement of the tonsils, that he has often announced the existence of one, from having detected the presence of the other. To prevent this occurrence, it is therefore of importance to perform the operation at an early period. The Editors state, that it is a mistake to suppose that the excision of the tonsils is more difficult in young subjects than in adults. By making some promise they may be induced to open their mouth, and when once they feel the gland seized, the fear of pain prevents them from moving so as to disturb the operation: M. Dupuytren recommends it to be done in the following way:—

"The child, surrounded by a sheet which confines his arms, is placed on the knees of a strong assistant, who fixes his legs by crossing his own, confines the hands to the thighs with his left hand, whilst with the right, placed on the forehead, he holds the head back, and rests it on his chest. Another assistant depresses the tongue with a spatula, whilst the operator seizing that part of the gland which projects beyond the pillars of the pharynx with a pair of forceps, cuts it away with a straight probe-pointed knife, (having

the edge covered with linen to within two inches of the point) and in a direction from below upwards."—Vol. iii. p. 314.

Uterine Polypi.—In this disease, M. Dupuytren recommends excision in preference to every other mode of treatment. To operate in this manner, the patient being suitably placed

"The surgeon begins by ascertaining whether or not the polypus has contracted adhesions with the surrounding parts; if any exist, they must first be destroyed by very long, strong, curved scissars, with blunt edges, which bruise the parts they divide, and so prevent bleeding. The tumour must then be grasped with strong forceps, and drawn without the vulva, of whatever size it may be, and even though a laceration of the external parts should be the consequence. That done, the pedicle appears, and nothing remains but to cut through it, either with a knife, or the scissars already mentioned. If, however, the presence of any large vessels should be indicated by pulsation in the pedicle, it is evident that it should not be cut through until a ligature had been placed upon it to prevent the occurrence of bleeding. M. Dupuytren, however, has never found this necessary. After this operation, which causes little pain, the uterus regains its situation; the bleeding, which is slight, stops of itself; all discharge ceases immediately, and the patients recover in a few days."—Vol. iii. pp. 343-4.

Castration.—To render this operation more speedy and easy, M. Dupuytren, whether he intends to make a simple incision in the integuments, or to remove an oval portion of them, commences by making them tense on the front of the tumour, grasping the latter behind, and at the sides with the thumb and fingers placed in opposite directions, and pushing it from behind, forwards, as though to press it through the skin. Scarcely is the incision large enough to admit the passage of the testicle, before it slips out like a kernel from its shell. It is then drawn up, detached by some strokes of the knife, and removed, the cord being secured by an assistant. "It is difficult," say MM. Sabatier and Beclard, "to form an idea of the quickness with which an operation performed in this way may be finished."—Vol. iii. p. 381.

Cancer of the Cervix Uteri.—The operation of excision, in this disease, has, of late years, been often performed on the Continent, and with a degree of success, not generally understood in this country. According to M. Dupuytren, it presents two different forms, which determine the choice between excision and cauterization.

"In the first, the neck of the uterus has retained sufficient firmness to admit of being fixed by pointed forceps, and the disease is not so far advanced but we may be sure of cutting into the sound parts; in the second, the parts are softened and rendered so friable

by the progress of disease, that it is impossible to grasp and fix them: the first case allows of excision; the second requires cauterization." "To perform excision, there are wanted a speculum uteri, of a size proportioned to that of the vagina, a pair of hooked forceps, a crooked knife with two cutting edges, or more commonly, a pair of long, curved, and strong scissars, with fine edges, a small cautery, charpie, compresses, and a T bandage."

"The patient being placed on the edge of a bed, with the legs bent on the thighs, and the thighs on the pelvis, the operator introduces the speculum and gives it to an assistant to hold: he then, taking the forceps in his left hand, grasps and draws gently down all that part of the neck of the uterus which is diseased, and cuts it away either with the knife, or better with the scissars, carried alternately upwards, downwards, or to the sides, and operating as far as possible on the sound parts.

"This process differs from that of M. Osiander, of Göttingen, who first performed the operation, in so far, that he did not use a speculum, and that he began by passing two loops of thread through the os uteri to fix it, instead of the pointed forceps of M. Dupuytren. In general, the flow of blood may be left to itself; but if bleeding continue from any one point, it must be stopped by cauterizing the orifice of the vessel; if it escapes from an extensive surface the vagina must be plugged.

"In destroying the disease by cauterization, the first step is to remove all the vegetations which cover its surface: this, M. Dupuytren does either with the curved scissars, or with a sort of steel spoon with cutting edges, or with a plate of steel, slightly curved square, with the angles rounded off, having a cutting edge on three sides, the fourth fixed into a handle. By means of these last two instruments, which act not only like knives, but like scrapers, M. Dupuytren has often scooped carcinomatous vegetations out of the interior of the uterus, and so facilitated the action of caustic. The caustic employed may be either solid or liquid: the former consists of pure potash, moulded into cones, the base being an inch thick, and the point blunt; the cone is fixed in a strong port-crayon, and the diseased surface is touched with the point or thick part according to circumstances. The liquid caustic is a solution of nitrate of mercury in nitric acid, from two to four drachms of the salt to an ounce of acid. Whichever of the two caustics is employed, the first step is to place a roll of charpie below the ulcerated surface, in order to absorb the portions of caustic which run off during the application, and which might act upon the vagina: this done, the diseased surface is carefully wiped, in order to dry it and to discover its disposition. The application of the caustic is continued for about a minute, unless the patient suffers great pain, which is not common. The operation is finished by a copious injection, which washes away all the loose portions of caustic." "At the end of four or six days, when the irritation has subsided, and the sloughs are detached, the ope-

ration is repeated, and as often afterwards as the appearance of the part requires."

Metritis and peritonitis are more to be feared after cauterization than after excision, but according to M. Dupuytren, the most effectual way of preventing them, is to put the patient into a warm bath, immediately after the operation.

We pass entirely over the subject of hernia, although the additions from the practice of M. Dupuytren, contain much curious and valuable information. Independent however of its extent, the greater part of it has been already communicated to our readers in the Review of Breschet on Hernia, in our second Volume.

Prolapsus Ani.—M. Dupuytren has invented a mode of operation for the radical cure of this disease, by which the danger of hemorrhage attending the excision of folds of the mucous membrane, or of hemorrhoids, is obviated. It consists in seizing, with a flat pointed pair of forceps, some of the folds of skin converging from the circumference to the centre of the anus, and cutting them away with a curved pair of scissars. He has cured many individuals by this process, which never fails when a sufficient number of the folds about the anus are removed, and when the excision extends sufficiently high along the rectum. If any considerable bleeding should take place, which however has never happened to him, he recommends the actual cautery in preference to the plug, on which he places little reliance.—Vol. iii, p. 684, &c.

Operations for Cataract.—The Editors appear to have put forth some opinions on this point, which are far from being generally consented to. They say, for instance, that "the Academy of Surgery, and those formed in that school, had decided in favour of extraction, and had proscribed depression. During the last twenty years, on the contrary, depression has been more generally practised, and in its turn tends to cause the abandonment of extraction." This statement appears to be grounded on the adoption of an error which, though often refuted, still exerts considerable influence, viz. the supposition that any one mode of operation is preferable absolutely to all others. It is evident, that often as the leading principles in the choice of cataract have been stated, they are still imperfectly understood. We grant that the Editors profess to recognize the principles in question, and which it is not our business to expose at present; but their subsequent opinions clearly shew, that in this respect they have deceived themselves. Extraction, depression, and division, are each applicable to a distinct class of cases, and cannot be indiscriminately performed with general advantage. The Editors confess, that the authority of names

does not afford any assistance in fixing the superiority of any particular operation absolutely: it is as easy to find advocates of eminence for depression as for extraction, and *vice versâ*. However this may be, it is evident that depression is the operation chiefly employed by M. Dupuytren, and which has been attended with the most favourable results in his hands. The Editors have given some valuable numerical statements: of 206 operations (extraction we suppose) by Daniel, 182 succeeded, or the successes to the failures were as $7\frac{7}{12}$ to 1: but the correctness of this admits of doubt. Richter cured 7 out of 10, and Sharp 5 out of 10, both by extraction. M. Roux, in 306 operations by extraction, obtained 188 cures; and of 177 patients operated on in one or both eyes, 132 recovered. According to M. Tartra, 43 operations by depression, performed at the Hotel-Dieu, between 1806 and 1810, gave 24 perfect, and 4 imperfect recoveries, whilst 70 cases of extraction gave only 19 perfect, and 6 imperfect recoveries. From 1814 to 1823, there came under the care of M. Dupuytren, at the Hotel-Dieu, 306 cases of cataract, precisely the number of M. Roux: of these, 265 were operated upon by depression, 7 by extraction, and 9 by keratonyxis; 25 were not operated upon: 216 of these operations were followed by complete recovery; 25 patients left the hospital in an improving state, and 40 remained as before. In clearer terms: of the operations by M. Roux, 3 in 5 succeeded: in those recorded by M. Tartra, the recoveries by extraction were to the failures, as 1 to $2\frac{1}{8}$; by depression, as 1 to $1\frac{1}{3}$: in those performed by M. Dupuytren, as $6\frac{1}{10}$ to 1. It is impossible to deny that the latter results are favourable in the highest degree; and it might be inferred, that this success was connected with the predominance of depression over extraction, and other operations in M. Dupuytren's practice, a predominance which, we think, justifies us in supposing that his choice could not have been guided by any fixed regard to the circumstances of individual cases; but we are inclined to believe that the great success is attached not so much to the operation as to the operator, and that with equal attention, equal science, and equal manual dexterity, almost any other operation would prove equally favourable. If this be the case, as we believe it to be, it is clear that the conclusion drawn by the Editors is too general; precisely the point we wished to establish: we have preferred arguing the point with them, solely on their own data; but it should not be forgotten, that they rest at most on the experience of one set of men only, and that they are, in a great measure, opposed to the opinions of the best surgeons of Germany, Italy, and our own country.—Vol. iv. pp. 174-5.

Lateral operation of Lithotomy.—M. Dupuytren has simplified the operation performed with the knife so as to effect it all at once:—

"The staff being introduced and held perpendicularly with the left hand, a long bladed knife is thrust through the integuments into its groove; the handle of the staff is then raised and carried forwards, whilst the knife, with its point still kept in the groove, is pushed on as far as the prostate and neck of the bladder. Its handle is then depressed, and the division of the external parts finished on withdrawing it. This process appears alarming; it proceeds well on the dead subject; but though M. Dupuytren has employed it with success on the living subject, prudence directs that the parts should be regularly and successively divided."—Vol. iv. p. 283-4.

In 1816, M. Dupuytren suggested a mode of operation similar to that of Dr. Thomson, of Edinburgh, and in which the prostate and neck of the bladder were divided by means of the lithotome caché directly upwards, towards the symphisis pubis; the advantages proposed were the remoteness of the internal incision from the rectum and from any large vessels; but it was found that the external wound was small, not correspondent with the internal, and the operation was followed by serious inflammation of the cellular substance about the neck of the bladder, attributed by the Editors to the force necessary for the extraction of the stone, instead of the infiltration of urine consequent on the indirect course of the wound, which there can be little doubt was the true cause. M. Dupuytren therefore abandoned the operation. The Editors do not give any details of its results in numbers, but it has been elsewhere stated, that five out of seven cases perished from the causes we have pointed out.

Recto-vesical operation of Lithotomy.—This operation, of which M. Sanson is the suggestor, is, as might have been expected, defended and recommended with all the warmth of a man attached to his own opinions. A comparison is drawn between its results, and those attending the various other operations: but of these the lateral, or lateralized, as the French call it, is the only one of importance, or with which we are at present concerned. The objections made to it by the Editors consist in the danger of hemorrhage, and inflammation arising from the force necessary for the extraction of the calculus. What the reason may be, we will not pretend to say, but from many statements on the subject, it would appear that alarming and even fatal hemorrhage after the lateral operation is much more frequent in France than we find it to be in this country; we do not at all intend to say that it is unknown among us, but

merely that it is not common; and that when it does occur, it is for the most part easily explicable, from the imprudent direction of the edge of the knife or gorget, transversely or upwards in the narrowest part of the arch of the pubes, and the consequent division of the pudendal artery. In the operation with the knife, or even with the gorget when properly directed, nothing can be more clear, than that there is not any vessel wounded of such a size, as to cause bleeding to a great extent. The assertion that the lateral operation is succeeded by inflammation of the cellular substance; from the impossibility of making an opening of sufficient size to extract the stone must be decided by facts and experience; and we have no hesitation in stating that it has been fully proved in this country, that an incision of the prostate and neck of the bladder, may be safely made of a sufficient extent to admit of the extraction of very large calculi: this applies only to the operation with the knife it is true; but let it be recollected that with the knife alone, it is the operation of Cheselden, the real lateral operation. But we do not think, that even when inflammation of the cellular substance does happen, it is the consequence of the force used in extracting the stone, but rather of the indirect and imperfect issue left for the escape of urine. The Editors state the fatality of the lateral operation as one in five, or even four, and certainly with such results it is not surprising that they should recommend another; but putting the success of Cheselden and Martineau out of the question, as being above the real average, we think they have over-rated the mortality.

The principal objection to the recto-vesical operation consists in the danger of permanent fistula between the rectum and bladder; the frequency of this accident is denied however by the Editors; and they state that of thirty cases in France, but two ended fatally; and that fistulæ, which must not be considered incurable, remain in five or six only. They say that M. Dupuytren has performed it, but they do not state whether he continues still to do so, nor indeed do we find any indication of the kind of operation now preferred by that surgeon. Their silence on this point would lead us to suppose that he had abandoned the operation they recommend so strongly.

Amputation.—M. Dupuytren objects altogether to the practice of dividing the skin, the superficial, and the deep-seated muscles by distinct incisions; according to him it is making three or four amputations of one limb; he thinks it better to cut at one time, and with one incision, the integuments, which are drawn up by an assistant, and all the muscles down to the bone: then, allowing the retraction of all the parts, and an

assistant still drawing them up, the adherent muscles are cut through, and the bone sawed on a level with them. The operation is thus performed with great rapidity, and with only two incisions.—Vol. iv. p. 471.

Amputation of the Shoulder Joint.—M. Dupuytren proposes two operations for this purpose, one of which we give.

"The arm being raised so as to form a right angle with the body, the heel of the knife is placed a little below, and in front of the point of the acromion: from this all the posterior parts of the shoulder are steadily divided by one incision, including the posterior fold of the axilla: a flap is thus formed, which being raised, exposes the posterior part of the joint: the elbow is then inclined forwards against the thorax, and the head of the humerus being thus made prominent, the tendons and back part of the capsule are divided upon it. The knife then turns round the head of the bone, from behind forwards, and the operation is finished by making the anterior flap, the artery being compressed in it before it is divided." —Vol. iv. p. 517.

Amputation of the Fore-Arm at the Elbow-Joint.—"The fore-arm being slightly bent, a straight double-edged knife is thrust transversely in front of the articulation, from one condyle of the humerus to the other, and a flap made from the upper part of the fore-arm. The flap being raised, the capsule and lateral ligaments are divided by a second incision, and the operation is concluded by sawing through the olecranon, or dividing the tendon attached to it. The vessels being tied, the flap is carried from before backwards over the end of the humerus, and fixed by strips of plaster."

M. Dupuytren recommends the olecranon to be sawn through, as it then continues to afford a solid attachment to the tendon of the triceps.—Vol. iv. p. 526.

Amputation of the Metatarsus at its junction with the Tarsus.—This operation was first methodically described by M. Lisfranc, who gives the following directions for performing it. It must be premised, that the line of the tarsal articulations of the metatarsus is marked at each extremity by the projections formed by the ends of the first and fifth metatarsal bones, and the internal extremity of this line is placed half an inch more forwards than the external.

"The extremities of this line being ascertained, the surgeon places the thumb and fore finger of his left hand on them, grasping the plantar surface of the foot. He then makes an incision on the dorsal surface, half an inch in front of the joints: the integuments having retracted, he divides the tendons of the extensor muscles. The knife, which should be small, strong, and sharp, is then carried behind the tarsal extremity of the fifth metatarsal bone, and its point brought from the outer side inwards, and from behind forwards, as far as the second metatarsal bone, where it stops. The three joints

over which it passes are easily opened, and only their dorsal ligaments are to be divided. That done, the knife is to be carried to the inner side of the foot, where the joint of the first metatarsal bone, with the cuneiform, is to be cut into in a direction from the inner side outwards, and from before backwards. It only remains to disarticulate the second metatarsal bone: for that purpose, the point of the knife must be introduced below, into the space separating the first cuneiform from the second metatarsal bone, and the handle of the knife being depressed, the strong ligament connecting these two bones is to be cut through. The rest then becomes easy: the joint is opened from its dorsal surface; the half detached part of the foot is depressed; the inter-articular ligaments cut through, and the knife placed horizontally below the posterior extremities of the metatarsal bones. Being then carried forward in close contact with them, a lower flap is made, longer on the inner than on the outer side, and capable of covering the exposed surfaces of the tarsal bones."—Vol. iv. p. 555-6.

The Editors admit that this operation is difficult to perform, until it has been rendered familiar by infinite trials on the dead subject. It may be doubted whether this will not more than counterbalance the advantages it possesses over the operation of Chopart, and the modifications of it commonly practised. The greatest of these advantages appears to be the greater length of the stump, from retaining in it the last row of tarsal bones.

The unusual length of this article warns us to conclude; but the number and extent of our extracts may serve, though very inadequately, to give some idea of the quantity of valuable matter which the additions to this Edition contain. Had our limits permitted, we should have had little difficulty in selecting other subjects of interest and importance, fully equal to those we have already presented to our readers.

ART. III. *An Essay on the Blood, comprehending the chief Circumstances which influence its Coagulation; the nature of the Buffy Coat; with a Concise Medical View of the Blood in Disease; and an Account of the powers of a saturated solution of Alum, as a styptic Remedy in Hemorrhage.* By CHARLES SCUDAMORE, M.D. F.R.S. &c. &c. London, 1824. pp. 162.

It cannot be doubted that much advantage would, in all probablity, accrue to the practical parts of medicine, from a perfect knowledge of the various circumstances which influence the nature and appearances of the blood, whether in health or disease.

We are far, however, from possessing any positive information on these matters, and every step that we take in the inquiry is so beset with doubts and objections, as to render it very embarrassing and unsatisfactory. The contents of Dr. Scudamore's book are very fully expressed in the title, and we need only add, that it is composed of a very considerable number of experiments, together with the conclusions deducible from them in relation to the physiology and pathology of the blood. He commences by giving a general view of its chemical composition and properties, principally derived from Mr. Brande.

Iron in the Blood.—Mr. Brande, as is well known, was the first to deny that the colour of the blood depended on the iron entering into its composition, a point now very generally admitted. He found that the quantity of iron in the blood (which is very inconsiderable) does not sensibly differ, whether the colourless coagulum or the red globules be examined. He has also shewn, that the colouring part of the blood-globules depends on a peculiar animal principle. Dr. Scudamore investigated this question, by examining with a magnet the arterial and venous blood of the sheep and the human subject, after it had been dried and powdered. In this manner he could not detect the smallest influence exerted by the magnet over any of the portions of blood, p. 15. A chemical examination of the incinerated arterial blood of the sheep, by means of muriatic acid, ammonia, and prussiate of potash, afforded some indications of the presence of iron. Dr. Scudamore comes to a conclusion between the opinions of Brande and Berzelius, as to the quantity of iron contained in the blood; but agrees with the former in believing that the colour of the blood is not to be referred to the presence of the metal, p. 16.

The composition of Dr. Scudamore's Treatise is so condensed, and so great a part of it consists in the recital of experiments, that it would be difficult to follow him in the detail of particulars; we shall therefore confine ourselves to giving a general account of the conclusions he has drawn from them, and enter more fully on points of interest.

Coagulation of the Blood.—The coagulation of the blood is evidently hastened by its exposure to an elevated temperature; the converse, the retarding influence of cold is still more strongly marked, p. 21. Blood in the exhausted receiver coagulated more quickly than when exposed to the atmospheric air, notwithstanding the counteracting influence of the reduction of temperature produced by the exhaustion. All communication with atmospheric air being prevented, and the temperature not reduced, coagulation was much retarded, p. 27. As is already

well known, an extrication of carbonic acid gas takes place during the process of coagulation; and from what appears to us a very ingenious and satisfactory set of experiments, consisting in an examination of the varied effects produced on lime water by the blood, under different circumstances of accelerated and retarded coagulation, Dr. Scudamore considers himself fully authorized

"In concluding, that the period of time in which the blood coagulates, depends, in a great measure, on the quick or slow extrication of carbonic acid gas. Its evolution takes place most freely as the blood begins to concrete, and ceases when coagulation is completed. It is evidently an essential circumstance in the process of coagulation, as the same causes which retain the carbonic acid in the blood, delay coagulation," pp. 102-3.; also pp. 27. to 35.

From a great number of experiments Dr. Scudamore concludes—

"That blood, possessing the highest specific gravity, coagulates the most quickly; and the best specimens of such blood are obtained from persons in health, and of robust constitution. Blood which gives the fibrinous coat in a great degree, has a lower specific gravity than healthy blood, and is slowest in coagulation. Fibrin is lighter than the red particles, and also lighter than serum.' '—p. 35.

Blood taken slowly, coagulates more rapidly than if it escapes in a rapid stream. This circumstance which has long been familiarly known, Dr. Scudamore explains by supposing that the blood parts with its carbonic acid more readily, and more completely. The coagulation of the blood is favoured by agitation, probably by accelerating the escape of the carbonic acid.

"The kind of vessel in which blood is received in venesection, deserves attention. If it be metallic, the coagulation of the blood is slow, from the material being a free conductor of caloric; and the blood separating more gradually into its component parts, in the order of their specific gravity, will more probably exhibit the buffy coat, than when a porcelain cup is used."—p. 114.

Blood received into a vessel with a considerable extent of surface, coagulates more slowly than in other circumstances; for instance more slowly in a saucer than in a bottle, because of the greater reduction of temperature which takes place in one than in the other case. Dr. Scudamore does not appear to be aware of Dr. Parry's statement of the effects on the production of the buffy coat, arising from the size of the stream, the size of the vessel, and the smoothness of its internal surface. Elements of Path. and Ther. 181-2. p. 71. Blood which possesses the fibrinous coats requires the longest time for its coagulation.

"In attempting to explain the coagulation of the blood, I should be induced to say that it depends on a new condition of the fibrin,

which can only exist fluid in a state of intimate mixture with red particles, serum, and carbonic acid gas."—"It will perhaps be asked, how does it happen that such blood as contains the largest quantity of fibrin coagulates the most slowly, when coagulation depends upon the fibrin? I conceive that the larger the proportion of fibrin is in healthy blood, the more rapid will be its coagulation." pp. 115-16.—"In answer to the question proposed, I contend, that when the fibrin is in great excess, it is less dense than in healthy blood, and takes the solid form more slowly. The excess is so abundant in very sizy blood, that the larger proportion remains in the upper part of the basin in admixture with the serum; and hence its slower coagulation. Also that portion which falls down with the red particles, is less dense than natural, and coagulates rather slowly." p. 117. "The fact most difficult of explanation is the variable proportion of fibrin in different cups of blood, drawn at the same bleeding; sometimes a difference of more than half between the contents of two cups." In one instance of sizy blood, the proportion in the first cup was 12 grains for 1000 grains of clot; in the last cup not quite 6 grains. "The highest proportion that I have found in healthy blood, has been for 1000 grains of clot, 4. 43 of fibrin."

On the supposition that in inflammation of the fibrous textures, the greatest quantity of fibrin is found in the blood, for example in inflammation of the heart, pleurisy, and acute rheumatism, Dr. Scudamore suggests that the fibrin, instead of being distributed to the fibrous textures as usual, remains in excess in the blood. We need hardly remark how very unsatisfactory this hypothesis is, and how slightly it is supported by fact: the only thing certain is, as the author himself expresses it—"That the fact of the different proportions of fibrin in different cups of blood filled at the same venesection, is clearly proved,"—the explanation still remains to be sought for.

Agency of the Vital Principle.—Dr. Scudamore denies the influence of vitality in the coagulation of the blood, and to use his own words, endeavours "to demonstrate that the changes which the blood undergoes when drawn from its vessels are entirely of a chemical nature." We do not know that he denies the vitality of the blood generally; but merely the agency of any vital power in the production of coagulation. This celebrated doctrine of Mr. Hunter's has been so much discussed that it would be tedious to enter on the subject at large, but we state that we cannot think Dr. Scudamore has proved his point. He argues that the coagulation must be of a chemical nature, because this occurrence is prevented by certain chemical agents, as salt and liquor potassæ, whilst it is not retarded by some powerful vital agent, as prussic acid and belladonna. But this mode of reasoning is evidently superficial and inadequate;

salt and liquor potassæ may produce such chemical changes in the composition of the blood as shall render it insusceptible of the vital agency, ordinarily productive of coagulation—so also the action of prussic acid and belladonna may be null as regards their power of promoting or retarding coagulation, without rendering it at all less probable that this may be a vital phenomenon: it is not only possible that the action of those two substances may be exerted on a particular system, but even highly probable that that is the nervous system; hence we cannot be surprised that as it regards the blood they should be inert. In vital, as well as in physical and chemical operations, there must be a mutual relation between the agent and the body acted upon; without attending to this relation, such experiments might be repeated *ad infinitum*, without being at all decisive of the question. Together with many others, Dr. Scudamore has killed animals by electricity, and found that the blood was coagulated. Allowing their full weight to such experiments, we may remark, that one positive instance must outweigh many negative ones. That after death by electricity the blood is occasionally found not coagulated is certain; why it is sometimes otherwise we do not pretend to explain; but the difference may arise from an infinite variety of circumstances, too minute perhaps to attract attention. Dr. Scudamore also found that coagulation was promoted by heat, and retarded by cold, and this he explains by supposing that the one favours and the other checks the escape of carbonic acid gas, which according to him is the determining cause of coagulation. But it would be equally rational to say, that the escape of the gas is merely a secondary and accessary circumstance, a result of coagulation; and to explain the effects of heat or cold on the phenomenon of coagulation by a comparison with their vital agency in analogous cases.

Temperature of the Blood.—But to resume our account of the experiments of Dr. Scudamore, he found that the temperature of the blood was elevated by the influence of electricity, the same effect resulted from the application of galvanism: from exposure to oxygen gas, the temperature of the blood was diminished comparatively by exposure to hydrogen gas, and to carbonic acid gas. It is well known that Mr. Hunter came to the conclusion from his experiments, that during the coagulation of the blood there was not any sensible evolution of caloric: this opinion was controverted by Dr. Gordon, of Edinburgh, and more recently supported and substantiated by Dr. John Davy. From the results of several experiments performed with every precaution, Dr. Scudamore thinks that he is warranted in contradicting the opinion of Mr.

Hunter, and Dr. Davy, and in asserting that a slight evolution of heat does take place during the coagulation of the blood. The experiments appear to be altogether unexceptionable, and we do not see how it is possible to avoid receiving his conclusion. In five out of six experiments which he has given, there was a positive elevation of temperature at the moment of coagulation, and in the remaining one, such a disengagement of caloric though not sensible, was probable, as, in the interval of six minutes, the blood lost only one degree of temperature.

Sir Everard Home's theory.—Whilst speaking of the evolution of carbonic acid gas from the blood, we were unwilling to interrupt our account of the experiments by adverting to Dr. Scudamore's criticisms on the hypothesis of Sir Everard Home on the production of new vessels by means of the channels created by it during the disengagements of the gas. With all due respect for the baronet, we believe that Dr. Scudamore has bestowed more consideration on the subject than it now merits. He does not appear to have been aware that the supposition of the production of vessels in this manner had been already refuted with every appearance of probability. (Vide Additional Experiments, &c. by Charles H. Parry. M.D. 1819, pp. 40-9.) Dr. Scudamore has however given it additional contradiction: Sir Everard Home stated that two cubic inches of carbonic acid gas were extricated from every ounce of blood. Dr. Scudamore, with the assistance of Mr. Garden, found experimentally that the greatest quantity he was able to obtain in any instance, was rather less than half a cubic inch from *six* ounces of blood. It is worthy of remark that blood in one case, drawn after dinner, yielded full double the proportion of that obtained from the blood taken away before the meal.—p. 107-8.

Practical Remarks.—From his experiments and observations Dr. Scudamore deduces some important medical considerations.

"In the examination of the blood in venesection, the practitioner must direct his attention to several circumstances; amongst which the following may be mentioned as the principal; the kind of orifice; the stream in which the blood flows; the state of the pulse during the bleeding; the apparent density, colour, and other appearances of the blood, on its being first received into the basin; the time in which it coagulates; the external appearance of the coagulated blood; the texture of the coagulum; the comparative condition of the several portions of blood in different cups; the appearance and quality of the serum."—pp. 135-6.

"The blood should be received in different cups; and the breakfast cup is the most suitable size. They should be put by in order, all in the same situation as to temperature, and not disturbed, so that we may be enabled to draw some useful inference of the

effect produced on the circulation during the operation of venesection, by the relative appearances of the different portions of blood. In deciding upon the presence or absence of the fibrinous coat, we must particularly refer to the quick or slow stream in which the blood has flowed. In active inflammation of the fibrous textures, the formation of the buffy coat cannot be prevented, because the fibrin in the blood is in such excess; but when inflammatory action of the circulation does not much prevail, we shall learn more of the nature of the blood from examining its texture, than from merely viewing the surface of the coagulum." "In general terms, I may state, that a firm texture of the blood points out a strong action of the blood-vessels, so as to give a presumptive sign that the bleeding has been proper; and *vice versâ*, if the coagulum be remarkably loose in texture, we should particularly question the propriety of repeating the operation. I may further remark, that when the clot possesses uniform firmness, and has its edges turned inwards, we may conclude that the blood-vessels act more strongly that when it is soft in its texture throughout, and having a thin flabby edge." p. 142-3.

Buffy Coat.—Dr. Scudamore repeatedly cautions his readers against supposing that the presence of the buffy coat, although indicative of inflammatory action, can, taken singly, warrant us in continuing to detract blood. The error of such supposition is now, and has long been generally recognized; the buffy coat is never more strongly shewn than in rheumatic cases, but at the present day no one trusts to bleeding in the cure of rheumatism, or continues to employ it until the blood shall have regained its natural appearance.

Styptics.—Dr. Scudamore, with the assistance of Mr. Wood, Lecturer on Chemistry at the Middlesex Hospital, made comparative trials on a dog, of the efficacy of various styptics: namely, acetate of lead, sulphates of copper and zinc, crystallized nitrate of silver, tincture of galls, diluted nitric acid, and Ruspini's styptic: we cannot help thinking that he might easily have found some more scientific and useful subject for experiment; be that as it may, he states that he found sulphate of copper, and still more Ruspini's styptic, to have an effect upon the hemorrhage proceeding from very small arterial branches, but not the slightest upon an artery of considerable size, which bled vehemently.

"On pouring the alum solution on this vessel, we were equally surprized and gratified to witness that in about a quarter of a minute the bleeding entirely ceased; and that it was thus effectually restrained by means of the tenacious coagulum so promptly formed, operating as a plug to the mouth of the vessel, was proved several times, by sponging away the coagulum; seeing the violent renewal of the hemorrhage; repeating the application with perfect success, and so on." p. 157, &c.

Dr. Scudamore has administered the same remedy internally,

in a case of hæmoptysis and one of hæmatemosis with success. He also recommends its local application in certain cases of hemorrhage from the unimpregnated uterus, especially of the passive kind—but we rather apprehend that he has stepped a little out of his sphere, when he states, that he is "sanguine enough to think, that under certain circumstances of hemorrhage after delivery, and the removal of the placenta, it will promptly prove a remedy for a state of imminent danger, when other means would probably fail,"—and when he recommends "that every practitioner in midwifery should constantly provide himself with a quantity of alum."

From the quotations we have made, it will be evident that many of Dr. Scudamore's experiments and conclusions are ingenious and important; it is to be regretted, that his Essay bears the marks of having been composed in great haste, or with much negligence; that it should be badly arranged, and contain many repetitions, and some puerilities not worthy of a man of science. The table of contents is the most confused thing of the kind we have ever seen.

Art. IV. *Traite des Convulsions chez les Femmes enceintes en travail et en couche, Mémoire qui a remporte le prix proposé par la Société de Médecine de Paris, pour l'année* 1820. Par Antoine Miguel. Paris, 1824. 8vo. pp. 164.

This is an ingenious and animated treatise on a very interesting subject. It is, indeed, not remarkable for the novelty of its matter; yet, as it inculcates many points of practical utility, with great perspicuity and eloquence, we need make no apology to our readers for giving them some account of its plan and execution, and for presenting them with a few of its most striking passages.

The work consists of four chapters and an appendix: the first treats of convulsions in general; the second, third, and fourth, are dedicated to convulsions, as they occur in pregnancy, during labour, and after delivery; and the appendix supplies some additional matter, which should have been inserted in the body of the work. The doctrines and practice contained in the three last chapters and appendix, are confirmed by a number of cases, selected from Ballonius, Mauriceau, De la Motte, Levret, Lorentz, Malacarne, Coutouly, Bouteilloux, Girard, &c.

Convulsion and Spasms.—Tonic and clonic convulsions, or spasms and convulsions, in the opinion of our author, differ only in degree.

"The Greeks," he says, "confounded these two states under one name (spasmos), and it is only by means of subtile and arbitrary divisions that the moderns have been able to separate them.—By what means are we enabled to prove that the nature of two diseases is the same? Is it not by the examination of their seat, their cause, their symptoms, and their treatment? If then, all these circumstances are the same in the two cases, is not the attempt to distinguish them, or make them different diseases useless? The seat of convulsions is very evidently the same as that of spasms; both are seated in the muscular fibre, wherever it is found, and in that alone. The identity of seat naturally supposes the identity of cause. There is some difference, indeed, in the symptoms; sometimes there is but a slight contraction, an evanescent shiver; sometimes the contractions are severe and frequent, followed by relaxation; and sometimes the contraction is violent and lasting, and presents but indistinct intervals of repose or remission.

But what proves that these varieties of convulsive affection are but different degrees of the same disorder, is this, that they are even met with in the same circumstances, and under the influence of the same causes; for they are observed, almost always, after large wounds, great operations, very severe fevers and excruciating pain; and that they naturally pass into each other, and are intimately blended in the greater number of cases. Tension and stiffness often announce convulsive movements, and these in their turn sometimes precede tetanus. Who can determine the time a permanent contraction should last, not to be convulsive? I do not know that this has been ever done, nor do I see any practical utility that could result from it. We may be told, that, in the treatment of spasmodic diseases, this distinction merits every attention; but Ballonius and Cullen thought otherwise, and they were no ordinary practitioners; and we have but to read the works of the most esteemed physicians to be convinced that the treatment generally recommended rests upon the same foundation, is regulated by the same indications, and requires the same remedies. A class of antispasmodic medicines has been established, but it has never been divided into two orders, the one destined to oppose spasm, and the other convulsion." pp. 7-8.

The author divides convulsions into two kinds, the one comprehending those of the voluntary, the other those of the involuntary muscles. The first kind he calls *external*, the second *internal* convulsions; but there is also a class of convulsions, compounded of these two, which he has named *mixed*.

Causes of Spasmodic Disease.—He now enters upon the consideration of the immediate cause and the nature of convulsion, and makes some remarks on that state of the human frame

which is most favourable to the production of spasmodic diseases; but as there is nothing very uncommon in his speculations on these subjects, we shall pass them over entirely, and give the reader merely their result, as summed up by the author in the following propositions:—

"The intervention of the brain or of the spinal marrow is necessary to produce the convulsions in the first order, or of the voluntary muscles.

"The brain may be affected directly or indirectly, and hence convulsions are idiopathic or sympathetic; this division should likewise be extended to convulsions of the involuntary muscles.—Convulsions are favoured by a particular state of the brain and nerves, by plethora, the sympathies of organs, &c.—The involuntary muscles are not subject to any general law with regard to the production of those convulsions which affect them."—pp. 22-3.

Convulsions of the Pregnant State.—We now turn to the convulsions which occur during pregnancy. These are no more a disease *sui generis*, than puerperal peritonitis is an inflammation of a different nature from ordinary peritonitis. But the parturient state modifies, in a striking manner, the influence of their causes and their mode of treatment; and it is of much consequence that the practitioner of medicine should study these modifications. All those causes which are capable of producing convulsions at any time, may equally produce them during pregnancy; but then those causes are much more powerful, because they are, in some sort, aided by a special permanent cause, which it is impossible to remove; and that is pregnancy itself.

"What is it in reality," says our author, "which constitutes pregnancy? It is the existence of a fœtus in the organ destined to preserve it. What is the most striking phenomenon of pregnancy? It is, certainly, the growth of this new living principle. This growth necessarily supposes an excess of life: the woman who furnishes its materials must then enjoy a state of more active vitality than formerly; and this of itself is a circumstance eminently favourable to the production of convulsions; and experience, which confirms this theory with regard to children, renders its truth still more evident in the case of pregnant women. This activity is first of all shewn in the womb, which is the organ appointed for this function; very sensible changes are taking place in its physical and vital properties; its substance becomes softer and more spongy; its sensibility becomes greater as pregnancy advances; and the irritability with which it is endued is so clearly exhibited, that M. Deneux has no hesitation in putting it on a level with the contractility of muscular organs. By this increase of vitality additional energy is given to the sympathies of the uterus, already so numerous and so various. Consider how keen is the general sensibility of woman at this period of life; the least agitation, the least shock,

the slightest impression, whether physical or moral, very readily deranges the natural equilibrium of her system; her physical constitution becomes softer and more relaxed than in its ordinary state; all its textures are moistened with fluids which soften them, and the fibres seem to lose their firmness, that they may be able to undergo the necessary distention: but this particular disposition and flexibility of parts, if they are still in a sound state, are far from indicating any debility of the system; they are but a state of body necessary for the growth of the fœtus at the expence of its mother. But it is not this laxity of textures which increases the irritability of the muscular fibre; these two phenomena coincide, but they do not depend upon one another; they are the immediate effect of the increased activity of life.

"It is to this activity alone, that the greater part of the phenomena which are observed during pregnancy must be attributed. It is through it that the nerves receive vividly both internal and external impressions, that the brain re-acts with vigour, and that the muscles obey its impulse with a correspondent energy. This cause which is manifested externally by a greater degree of nervous sensibility, is no less evident internally; as may be proved, provided the body is in a healthy state, by the strength and liveliness of the pulse, and the activity of digestion. It has been said that the intellectual faculties are weakened; and although a statement of Larry's proves the direct contrary, we may easily explain this phenomenon, when it exists, by shewing that the concentration of vitality upon a particular organ necessarily occasions a degree of weakness in some of the other functions. It is the womb which is here indisputably the central point on which all the organs re-act, and it is thence that all the sympathetic irradiations take their departure, that go to communicate to all the systems the feelings of the uterus, and to subject them to the powerful influence under which that organ is itself placed, until a fixed period.—From this sympathy a great number of diseased actions spring, more or less dangerous, according to the parts affected or the nature of the diseased action. One of the most frequent of these is convulsion, and the influence of the uterus may produce it in every part where there is muscular fibre. The uterus itself, formed of a substance, the texture of which appears different, but of which the functions are not at all equivocal, is evidently muscular, and this circumstance gives additional energy to its re-action. The stomach, the diaphragm, the heart, the external muscles, all participate in the particular state of this organ. Continually stimulated by the body which it incloses, continually in action on account of the important function which it fulfils, it may be considered, without risk, as in a state of permanent irritation."—pp. 24-8.

We have ventured to extract the whole of the above passage, as it will convey to our readers an accurate idea of our author's manner, and impress strongly on the mind what cannot be too

well known. We may observe, however, before quitting this subject, that the sympathy of the uterus is often productive of beneficial consequences.

Causes—The causes of convulsion during pregnancy, are now treated of under the heads of plethora, hemorrhage, distention, and irritation of the womb, abuse of sexual intercourse, errors in diet and regimen, and passions of the mind. Plethora, the first of these, has been regarded from the earliest times as a powerful cause of convulsions; and its opposite state, inanition, has been regarded as no less so by Hippocrates and Galen. The latter indeed has made use of this strong expression; "Ego in convulsione tertiam causam præter inanitionem et repletionem nondum reperi."

In the pregnant state, also, nothing is more apt to produce convulsions than improper food, or even the abuse of that which is of the most wholesome quality.

"At every period of life," says our author, "spirituous liquors are contrary to the temperament of woman; but it is more particularly in pregnancy that their effect may prove fatal. Nothing perhaps produces convulsions with greater certainty than drunkenness; women of a certain rank, indeed, are not exposed to it; but even with them the inconsiderate use of coffee produces effects, which are in no respect less fatal. This beverage, extremely stimulant, irritates the nervous fibres, the sensibility of which has already been much increased by pregnancy; so that irritability of the stomach, excitement of the heart, agitation of the muscles, and sleeplessness are its ordinary effects. We may thus judge if coffee is as fit for pregnant women as its very general employment would argue it so to be."—p. 36.

Of all the passions, anger is oftenest attended with bad consequences; sudden and long continued laughter, may also produce convulsions; and hatred, jealousy, sorrow, may have the same effect, in different degrees, or may bring on premature labour.

Independently of the above causes, convulsions in our author's opinion, may be attributed to imitation; for in an hospital, when a pregnant woman is seized with convulsions, it is no uncommon thing to see several other women in similar circumstances attacked in the same manner. Such is the fact, indeed; and M. Miguel thinks it more philosophical to assign it to imitation, than to a certain constitution of the atmosphere.

Partial or General Convulsions of Pregnancy.—The convulsions occurring during pregnancy may be partial or general; and the first of these may be divided in the manner we have already mentioned. External partial convulsions belong to the face, trunk, and limbs.

"Even, says our author, in her best state, there exists in the physiognomy of a pregnant woman, an alteration which it is impossible to define, but which is known at once by people of experience. This change which takes place in the features, and particularly in the lips and chin, indicates a very marked sympathy with the uterus; and if this sympathetic influence becomes morbid, the particular state of the muscular fibre which occasions it, easily degenerates into convulsion. This may affect all the muscles of the face, and give rise to those singular distortions, vulgarly named grimaces, the infinite number of which defies description."—p. 41.

But we must not follow the author in his account of these partial convulsions, among which he includes cramp and chorea.

Internal partial convulsions are those of the heart, stomach, intestines, and uterus, of which M. Miguel has given a short, but accurate description. Speaking of the latter he observes, that we ought to consider as uterine convulsions those contractions which, for the most part, without any known cause, occur during pregnancy; and which, commonly are the forerunners of abortion.

Vomiting, cough, and hiccup, are placed under the head of mixed partial convulsions.

"Almost from the first moment of conception," says M. Miguel; "the stomach seems to be a sharer in the new sensations of the womb; nausea, which is but an attempt at vomiting, commences; vomiting soon follows; and this sensibility of the stomach is, to the vulgar, and often to the physician himself, the only mark that pregnancy has taken place."—p. 49.

Cough is often very troublesome, and is not always free of danger. Never, in any case, is there a mucous or purulent expectoration, unless the patient be affected with catarrh or some organic disease of the lungs. Hiccup is rarely dangerous, but becomes very troublesome when it is prolonged; and sometimes it is so fatiguing that it occasions vomiting. M. Miguel knew a woman who was troubled with it during the three last months of pregnancy, but who felt no more of it after her delivery.

"General convulsions," says our author, "are sometimes preceded by the partial ones which we have now been considering. But at other times they attack the patient without a single precursory symptom, without any local disturbance, in short without any prelude which might make their appearance dreaded. In ordinary cases, however, dull pains, considerable anxiety, tingling of the ears, dazzling of the eyes, deep sleep, starting of the limbs, a sense of something creeping on the skin, a feeling of oppression, a sensible difficulty of breathing, precede the invasion of the fit. The pains, particularly the headache, in a short time increase, the eyes have a wild expression, the patient becomes blind or deaf, con-

sciousness is lost, the functions of the brain cease, the limbs are agitated by convulsive motions; then the breathing becomes noisy, the mouth and nostrils are filled with foam, the eyes roll in their sockets, the agitation of the muscles is extreme, the spasmodic locking of the jaw, the grinding of the teeth, the noise and oppression of the breathing, the violent beating of the carotid arteries, the tumefaction of the jugular veins, the involuntary ejection of the urine and fœces, the distortion of the trunk, the swelling of the face, the projection and enlargement of the tongue, altogether present a spectacle truly terrifying. After this state has lasted for a longer or shorter time, the woman falls into a profound sleep or stupor. The breathing becomes more tranquil, but it does not return to its natural state; the memory and other faculties of the mind remain suspended, and the patient is still blind and deaf. A new fit commences, the same phenomena are exhibited, and the convulsions, thus renewed a great number of times, leave the woman without sense and almost without life, for several successive hours or even days. When the attacks are so frequent and so violent, the woman generally sinks under them; but labour in the mean time comes on, and the life of the fœtus is even in greater danger than its mother's. Besides abortion, which is then the ordinary effect of these violent convulsions, the affection of the brain which produced them, rises sometimes to such a height as to occasion hemiplegia, or even apoplexy. But it is not at all times that general convulsions present such horrible spectacles, or are attended with such danger."—pp. 53-4.

The most frequent cause of general convulsions is plethora, particularly in the vessels of the brain; but very often there is no external symptom indicative of cerebral congestion. The brain, however, is always affected, but the cause of its being so, is beyond our reach. The partial convulsions which occur in pregnancy, are oftener sympathetic than idiopathic, while general convulsions are more frequently the effect of local congestion, than of sympathy. General convulsions the author calls neither apoplexy nor epilepsy, nor hysteria, but merely the effect of cerebral re-action, which in different individuals may be infinitely varied, from an involuntary chill to the most violent epilepsy or tetanus.

Prevention.—With the view of warding off convulsions, the physician's whole attention must be directed to nervous irritability and plethora. The first may be remedied by tranquillity of mind, by anti-spasmodics, by moderate exercise, and a well regulated diet; but if the second is present, we must have recourse to blood-letting, which is then the quickest, the surest, and the most beneficial remedy that can be employed; and in this all practitioners agree. It abstracts instantly a most powerful stimulus, and relieves the brain from a state of strong excitement, and modifies general sensibility in a striking manner. It

is of most use against general convulsions. During pregnancy, a woman has been bled ninety times. Such examples, says M. Miguel, should not assuredly be imitated, but they show to what an extent blood-letting may be carried, and how easily blood is reproduced in pregnant women.

Prognosis.—The prognosis in this disease is formed from the age of the woman, the place of her abode, the period of her pregnancy, and the kind of convulsion by which she is attacked. When the woman is not young, when she is the inhabitant of a crowded city and near her time, and when the convulsions are general, there is always great danger.

Treatment.—We need not enlarge on the curative means to be employed in partial and general convulsions, as they are well known; but we may remark, that almost in every case, the favourite remedy of our author is blood-letting, most others with him being merely accessory to it. And when there are signs of sanguineous congestion in any of the principal organs, he very properly reprobates the use of opiates; but where cerebral excitement is present without congestion, the tincture of opium, in combination with some mild and agreeable anti-spasmodic, may be administered with great advantage. In such cases, M. Miguel recommends highly a combination of camphor and opium. Emetics, he disapproves of. When, after the fit, the woman remains comatose, he advises the use of blisters to the back of the neck, the thighs and arms. Cupping and scarifying, he thinks are too seldom employed. The application of cold water to the head in congestion is a rational practice, but in mere nervous excitement it may be attended with the worst consequences.

Puerperal Convulsions.—Speaking of the convulsions which occur during labour, our author observes that labour itself very frequently induces them; 1. by the effect of the partial and general contractions which it renders necessary; 2. by occasioning the blood to be regurgitated towards the head and into the minutest vessels of the brain; 3. by the sympathetic effect of pain, which affects all the nervous, and consequently all the muscular system. In the second case, the convulsions are idiopathic, in the first and third, sympathetic. We regret that our limits will not allow us to transcribe M. Miguel's very vivid picture of the phenomena of labour, pp. 89-90. Besides labour itself, every thing that is capable of thwarting the contractions of the womb, of retarding the birth of the child, or occasioning efforts beyond those which are naturally necessary, must increase the tendency to convulsion, and may be regarded as one of its causes. In such cases, which it would be waste of time to enumerate, the

contractions of the womb very speedily become morbid; and consequently general convulsions frequently attend them.

"Compare," says M. Miguel, "all the observations of those authors who have spoken of convulsions that come on during labour, and you will almost always find that the birth of the child had been delayed for some time by an obstacle which opposed its passage, and that the labour had been languid for some hours. I do not say that is always the case, but it happens often enough to justify the connection which I have pointed out betwixt morbid contractions and convulsions. If their identity is not acknowledged, it must be allowed that they have a great resemblance, and that if we wait for the appearance of the first, we almost always run the risk of meeting with the second."—pp. 95-6.

Prognosis.—In these convulsions our prognosis rests upon the same ground as in the former.

"If they have not commenced," says our author, "before uterine contraction has taken place, we may be able to prevent them by appropriate remedies. For this purpose, blood-letting, repeated according to circumstances, will prevent the bad effects of plethora; emollient and mucilaginous lotions, unctuous liniments, &c., will diminish the rigidity of the parts; change of position of the fœtus, when it is practicable, will prevent the inconveniences of a preternatural presentation; and by rendering the delivery more easy, these means may be regarded as prophylactic or preventive of convulsions. Even when the convulsions have begun, these means ought on no account to be neglected, as they may remedy the cause which produced and keeps up the convulsive action. But in spite of these remedies, it often happens that the convulsions continue, without our being able to assign any cause for their existence but the labour itself of parturition; and it is only by putting an end to it, that we can save the woman from the violence of a disease which threatens her with death."—pp. 99-100.

Treatment.—Several authors have taught, that when convulsions make their appearance during labour, we should have recourse immediately to artificial delivery, but others have been unwilling to establish this as a general rule. Artificial delivery, they think, should never be employed, but when the efforts of nature are altogether unavailing.

"If," says M. Miguel, "when labour is complicated with convulsions, the appearance of the patient, the flushing or lividness of the face, the fulness of the vessels, the strength of the pulse, the throbbing of the carotids, &c., indicate a state of plethora, we must have recourse instantly to blood-letting, from the arm or the jugular vein if possible, or, if that cannot be done, we must apply leeches to the fore part of the neck, to the temples, or behind the ears; and these remedies must be repeated or not, according to circumstances. It is in such a case as this, which is the most common, that frequently washing the head with cold water, cupping and sca-

rifying the back of the neck, and using acrid and irritating glysters, are of decided benefit. If, on the contrary, the paleness of the face, the brilliancy of the eyes, a small confined pulse and clear urine, give evidence of irritability of the nervous fibre, without cerebral congestion, a state much less frequent than the preceding one, we must employ baths, opiates, anti-spasmodics, anodyne glysters, musk, camphor, and assafœtida; then also sinapisms and blisters to the feet, legs, and thighs, and if such a state be occasioned by violent pain, originating in laceration of the womb, ulceration, &c., we must place our chief dependence upon opium."—p. 102.

We think it needless to follow our author on the subject of artificial delivery, but we extract the following passage, as it investigates a very interesting question.

"Hitherto," he says, "we have supposed the orifice of the womb sufficiently dilated to permit the exit of the fœtus, or at least capable of being so far dilated as to allow the hand to be introduced into the inside of its cavity. This condition is essential to every kind of delivery. But there are cases, and particularly during the continuance of convulsions, when the orifice of the uterus resists equally the exit of the fœtus or the introduction of the hand. It would seem that there the uterine fibre itself is in a state of spasm, or tonic convulsion, which confines it and shuts its orifice. It resists the finger which attempts its dilatation, and it would be ruptured, sooner than be dilated. This constriction of the orifice has for some time attracted the attention of practitioners, and an operation has been proposed to remedy it."—pp. 107-8.

When the usual remedies have failed, an incision has been made through the edge of the orifice, and it has succeeded. On this important subject we may subjoin some observations of M. Chaussier, which our author has inserted in his appendix.

Belladonna.—"Various considerations," he says, "determined me to seek some milder and more rational method of cure; and as henbane and belladonna, when applied to the eye, occasion the dilatation of its pupil, I had some hope that a preparation of these plants might have the same effect on the orifice of the uterus. For this purpose, about fifteen years ago, I got a pomatum made of henbane, and another of belladonna, and gave some of it, with the instrument necessary for using it, to madame la Chapelle: and she informed me that she had always found it very serviceable in difficult cases of rigidity and resistance of the orifice, or of the uterus, or even of the vulva. Madame Legrand has also employed it several times, and always with great success. This pomatum consists of eight *grammes* of good extract of belladonna, diluted with as much distilled water, and rubbed up with thirty-one *grammes* of simple cerate or purified hog's lard."—pp. 163-4.

This pomatum is applied to the os uteri and its circumference, by means of a syringe of a peculiar construction; and generally

in about thirty or forty minutes after the application, the orifice of the uterus becomes so much softened and relaxed, that it presents no longer a resistance of any kind. (See also Anderson's Journal, Vol. i., page 323.)

M. Miguel attributes the convulsions which occur after delivery to hemorrhage, clots of blood, wounds, laceration, or contusion of the womb, errors of regimen, suppression of the lochia, abuse of purgatives, and passions of the mind. We give his remarks on hemorrhage, as being by far the most interesting of those subjects.

"It occurs oftenest," he says, "after delivery. When an animal is bled to death, it dies in convulsions. At the moment when life departs, all the great muscles are agitated with irregular movements, and as there is no way of restoring to the vessels the blood which has been taken from them, it is impossible to recall to life animals thus deprived of blood, when the quantity of that fluid which has remained in the vessels is not sufficient to excite those organs, the functions of which constitute life. Thus the hemorrhage which is followed by convulsions in women who are pregnant, or in childbed, is almost constantly mortal. Here, the convulsions do not cause death; they are merely a phenomena attending the last moments of life. The cause of this phenomenon has been sought often. M. Baumes attributes it to a deficiency of tension in the vessels which brings on a relaxation of the whole system; but how can a relaxation, a deficiency of tension, give rise to the most lively and energetic contractions? Leroux, of Dijon, looks upon convulsive syncope as a preservative effort of nature; and this opinion, which Ballonius had previously entertained, has been adopted in the present day by M. Broussais; but to me it appears liable to many objections. Were I to choose an hypothesis, I would rather have recourse to the mode of negative excitation of Bichat; for it must be acknowledged that there is a change of state in the condition of the brain. This change produces a vitiated action, but this action cannot last long; for the sudden absence of the ordinary exciter, an absence which has been able to occasion irregular movements, cannot support them like the exciter itself, which is certainly renewed. This impression not being renewed, it is full but for a moment, and then is instantly dissipated, unless there be still a quantity of blood sufficient to support that relic of vitality which is just upon the point of being extinguished."—pp. 138-9.

But we must stop here, for at every step we move farther our author becomes more and more obscure; and at last ends the subject with saying that he knows nothing about the matter. By internal hemorrhage, at this period, is generally meant extravasation of blood or its accumulation in the cavity of the uterus; but such hemorrhage may also be occasioned by the rupture of a blood vessel in the abdomen or chest, from the ex-

ertions made during labour. In all these cases, convulsive syncope is generally followed by death.

The same kinds of convulsions may come on after delivery, as those we have already mentioned; but they happen much more rarely; indeed seldom any other but hysterical or epileptic women are attacked by them. When they occur to other women, they are generally the sequel of convulsions which have preceded labour, or appeared during its continuance. In all cases, the remedies are nearly the same. Our author's remarks on this subject are sensible and perspicuous, but they are not new. However, we shall transcribe his concluding paragraph.

"In all cases," he says, "we must pay attention to the strength of the patient, to her original temperament, to the obstacles which have occurred during labour, to the time which has elapsed since delivery, and in short, to the phenomena of the secretion of milk, and of the excretion of the lochia, which necessarily take place. Here the accoucheur enters upon the general domain of medicine, and the rules which he has to follow, do not belong more particularly to his own art, than to any other branch of the healing art; which proves that midwifery is not purely mechanical, and that to exercise it with success, the accoucheur must join to manual dexterity, the most profound knowledge of physiology, dietetics, and therapeutics."—p. 148.

We have thus finished our review of M. Miguel's work. The author has a clear head, and he draws pictures of disease admirably, and in a very lively and interesting manner. Puerperal convulsion, however, seems to be his hobby, and when he once gets on it, he is apt to continue there longer than may be agreeable to the generality of readers. Notwithstanding this, he is a most agreeable writer; and we hope that he will soon throw the fascination of his manner over some other practical subject.

ART. V.—*Mémoire sur l'existence de la Paralysie du meme côté que la lesion cerebrale qui la determine.* Par. A. L. J. BAYLE.

The existence of paralysis on the same side with the injury of the brain, has been alternately asserted and contradicted by men of equal authority, and no explanation has hitherto been given of the apparent anomalies with which the question is complicated. We make no apology, therefore, for publishing the following paper in a complete form, because if it does not perfect

the theory of the occurrence, it at least seems to place its existence beyond a doubt.

Of the ancients, Aretæus was the first to remark that paralysis succeeding apoplexy, affects the side of the body opposite to the injury of the brain: but this able observer, deprived of the light of anatomy, had only exposed this truth generally, rather as a conjecture than as being founded on facts capable of carrying conviction. Hence, several who followed him rejected the doctrine, either from ignorance, or from having really met with facts in opposition to it. Valsalva, guided by pathological anatomy, renewed the idea, confirmed it by long and multiplied researches, and grounding himself on the results of a large number of corresponding observations, considered it as a fact without exception. Morgagni found the doctrine of his master conformable to observation, but did not admit it in so absolute a manner.

From those times to the present, dissections infinitely multiplied, have constantly shown hemiplegia occurring on the opposite side to the injury of the brain: and the annals of our science abound with such cases. In the midst, however, of this imposing mass of positive proofs, two facts recorded by men of deserved celebrity appear in contradiction to all the others. On that account most modern physicians have rejected them as incomplete or ill-observed. M. Rochoux * thinks it impossible, in the present state of our knowledge, to conceive such a circumstance, and supposes that in a hasty transcription, one side of the body must have been mistaken for the other. M. Serres † thinks them altogether erroneous, even that recorded by the great Baglivi. M. Portal, on the ground of an observation of Lieutaud, does, indeed, admit the occurrence of paralysis on the same side with the injury of the brain, but the case is so imperfect in anatomical details as to be inconclusive, except to those who, like M. Portal, had a personal acquaintance with the fact.

Of those who have embraced the doctrine of Aretæus in an absolute manner, had not neglected all historical inquiry—if they had not rejected, without examination and discussion, the observation of Baglivi, quoted by Corvisart and others, as proving the point that we propose to establish; if, instead of accusing such a profound observer of precipitation and illusion, they had attentively read the case that he relates, and submitted it to a severe analysis, they might easily have discovered that it

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* Recherches sur l'Apoplexie.

† Annuaire Medico-Chirug. Vide. Quart. Journ. For. Med. Vol. iii. p. 279.

was not opposed to the opinion of Aretæus, as we shall soon show.

We shall establish the fact, that paralysis may exist on the same side with the cerebral lesion which occasions it, by means of seven observations; six extracted from the works of Smetius, Forestus, Valsalva, Brunner, and Morgagni, and one collected by ourselves. Before presenting these facts we shall give an extract from the history of the celebrated Malpighi, by Baglivi, in order to convince those who have quoted it, that it in no degree tends to prove that paralysis may exist on the same side with the cerebral injury.

Case. 1.—Marcellus Malpighi, aged, 66, was attacked with apoplexy, 25th July 1694, after having suffered from the effects of chagrin. The fit was followed by paralysis of the whole of the right side of the body, distortion of the mouth, of the right eye, &c. Baglivi here prescribed blood-letting, cupping, sinapisms, &c. After forty days of most serious symptoms, the apoplexy and hemiplegia were removed. His memory and intellect, however, still continued deeply affected. He shed torrents of tears on the slightest occasions. He lost his appetite, his digestion failed, and there were slight convulsions, with vertigo. In this condition, he was again seized on the 29th November, and in spite of all remedies died in four hours. On opening the body, Baglivi found about two pounds of black, clotted, blood in the right ventricle of the brain, and in the left, a little yellowish serosity. The vessels of the brain were varicose throughout, and the dura mater adhered very closely to the cranium.

If this observation be attentively read we cannot avoid attributing the enormous effusion found in the right ventricle, to the last of the two attacks of apoplexy. How, in fact, can it be supposed that two pounds, or even a much smaller quantity of blood, could have poured into the cavity without occasioning death? Those who see, in this case, a proof that paralysis may exist on the same side with the cerebral injury, have confounded the periods of the two attacks of apoplexy; by this inattention they have made the hemiplegia of the right side which followed the first attack, depend on the effusion of blood which took place in the second after an interval of four months. The cessation of the hemiplegia proves, that on the first occasion Malpighi was affected with great and sudden congestion in the brain, which being most considerable on the left side, caused paralysis on the right. In fact, when there has been hemorrhage in the substance or cavities of the brain, the paralysis may cease in part, but never completely, a degree of numbness always remaining. As to the last attack, Baglivi does not mention the symptoms, and particularly whether it was followed by hemi-

plegia on the right side, which would have been indispensable to make the case conclusive. But from the enormous quantity of blood, and the rapidity of death, it is probable that the patient died in a state of coma, with complete immobility and insensibility.

Case. 2.—A porter was struck by a spear above the left temple, causing two wounds, and a small fracture of the cranium. Notwithstanding he was paralytic in the *right* arm, on *that side* of the head, and not on the *left,* the lacerated veins had poured a large quantity of blood into the cranium. The patient died on the third day, with loss of voice, sensation and intellect *.

This observation although equally imperfect in historical detail, and in the description of the appearances, establishes the existence of paralysis on the same side with the cerebral injury. The author had himself remarked it, as appears by the phrase, "on the right side and not on the left," indicating that he was aware that the case formed an exception to the common rule.

Case 3. "A child of two years was attacked in July, 1545, with lethargy. Whilst in this state he appeared affected with hemiplegia, the right side being paralytic, without motion or feeling. He died on the fourth day. The skull-cap being raised, the brain and cerebellum on the right side were found sanious, putrid, sanguinolent; the abscess having changed to sphacelus, on the left side the cerebral substance was white and unchanged." (Forestus. lib. 10. c. 12.)

In this, as in the case above, there is much want of precision in the account of the symptoms and appearances. But it cannot be denied that there was considerable change of structure on the right side of the encephalon, without any on the left.

The expression "appeared affected with hemiplegia"—might afford some ground for doubt, did not the author add that the right side was deprived of motion and feeling, proving evidently that the left had retained those powers.

Case 4. "A man, aged 66, who had suffered illness for some years, whilst at stool began to complain; his face became alternately red, livid, and pale. At this period the whole of the right side of the body was struck with paralysis and flaccidity, and death ensued within a few hours. On opening the head, blood was found effused in the ventricles. The source from which it proceeded, was in the substance of the brain, which was ulcerated almost to its external surface. The ulceration of the size of half the fist, occupied principally the *right* optic thalamus †."

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* Smetius. Miscell. lib. 10. p. 258.

† Valsalva, in his letters to Morgagni, in his Treatise on the Human Ear. Let. 13, No. 19.

Case 5. "A woman, aged 47, of short stature and full habit, had three children at her first confinement, and subsequently sixteen others. In Nov. 1680, she was attacked by apoplexy, and the right side of the body was deprived of sensation and motion. Brunner prescribed bleeding, blisters, friction, &c. By such means she recovered the use of the parts affected, with the exception of a slight degree of weakness. She had previously been miserly and attentive to her duties, but now became prodigal, negligent, and addicted to drinking. In consequence she was reproached and beaten with a stick by her husband; it was even said that she received a wound on the head. She complained of headache and vertigo with fear of falling. In 1688, she was seized with violent apoplexy and sudden loss of sense. The menses being present, she had on that account deferred bleeding, by which she had been often before relieved. She had risen at her usual hour, and begun her usual employments. A neighbour had seen her at nine in the *morning*, carrying a vessel on her head; she then complained of lassitude and staggered in walking, though there was no suspicion of intoxication. She was returning to lie on the bed, when she fell insensible on the stairs: her neighbours carried her to bed; her limbs were convulsively agitated; respiration was unequal and stertorous; she could not be excited by pinching; the pulse was in the first instance accelerated, soon became slow, then weak and languid, and death took place about ten in the *morning*.

Dissection.—"A serous fluid issued from the cranium: the external surface of the brain presented no other change than a slight redness: there was some air in the veins entering the longitudinal sinus. At the posterior part of the *right* hemisphere above the ventricle, was a cavity, large enough to hold a nut, and containing a small quantity of fluid; round this part the substance of the brain was brown and yellowish, with difficulty to be cut, and appeared to have long acquired this consistence. At that part of the same hemisphere where the carotid divides into branches, was another cavity, also containing a little fluid, its parietes membranous, and not easily to be cut. A third cavity, like the two first, was found in the corpus striatum on the same side, and like them lined with a yellow membrane of firm consistence. The right ventricle was full of serous blood which had passed also into the left. In the substance of the *right* optic thalamus, was a large opening or fissure, containing a clot of blood as large as a pigeon's egg. The substance of the brain round this clot was lacerated and disorganised, as far as the bifurcation of the optic nerves. The right corpus striatum appeared soft, withered, and of a yellow colour. The posterior part of the right ventricle, presented some granulations of the size of a pin's head. The fourth ventricle and the infundibulum, which was open to the pituitary gland, were full of blood. The remaining parts of the brain were healthy *.

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* Brunner Miscell. Curios. Nat. dec. 3. Obs. 154.

This case is very complete, full of important and conclusive details, although at first it might appear liable to the objections which we have made to the case of Malpighi—but if we consider that after the first attack, the hemiplegia never completely disappeared, and that the three cavities found in the right hemisphere contained only a small quantity of fluid, and were lined by a consistent membrane, characters which prove them to have been of ancient date, we may be satisfied that the paralysis of the right side was caused by the effusion of blood in three parts of the right hemisphere. This blood, during the period which elapsed from its effusion to the death of the patient, was gradually absorbed and the membrane formed, which some modern physicians, who have supposed themselves the first to observe it, have called the apoplectic cyst.

The last attack was produced by the disorganization of the right optic thalamus. The clot of blood it contained, and the mutilation of the surrounding parts, attest the recent date of the effusion. The change of the right corpus striatum, was evidently a softening of that part; and it probably happened at the same time with the cerebral hemorrhage, and was possibly the cause of the convulsive motions which attended the last attack.

Case 6.—"An old woman was attacked by apoplexy and paralysis of the limbs of the *right* side, though not altogether complete. Three months after, she fell into a state of stupor, and perished in a few days. Contrary to the indication of the hemiplegia there was no alteration in the left hemisphere of the brain. In the right hemisphere the vessels of the arachnoid, particularly at the top of the head, were loaded with blood. The substance of the right hemisphere presented a singular and extensive injury; it was situated at the upper part, and occupied a space three or four fingers breadth in length, and as much in width at its broadest part. Within this space the medullary and cortical substances of the brain were of an uncommon reddish brown colour, and of a degree of softness not less than if the part had been chopped and triturated, so as to make it diffluent; it was not fœtid. The rest of the brain presented nothing morbid, excepting a certain degree of softness when compared with the cerebellum and spinal cord*."

In this case we find a very considerable softening of the right hemisphere, with hemiplegia of the right side. It is the more decisive as Morgagni noted it, as forming an exception to the general law of decussation in affections of the brain with paralysis.

Case 7.—"A countrywoman, aged 24 years, and in the sixth month of pregnancy, became apoplectic with paralysis of the *right* side of

* Morgagni. Lett. 57. No. 14.

the body; abortion speedily ensued, and she died in half an hour. The vessels of the arachnoid were injected, and under this membrane, as often happens, was some water. In the substance of the *right* hemisphere, on the outer side of the corpus striatum, was a cavity at least two fingers breadth deep, and containing a clot of blood. Although the wall of separation between this excavation and the right ventricle was half broken in several places, scarcely any blood had escaped into that cavity. Neither was any to be seen in the left ventricle, which as well as all that hemisphere did not present any morbid appearance*."

Of all the facts here related, none is more conclusive than the present. Morgagni met with it at a period when all his researches had confirmed the doctrine of Aretæus and Valsalva. He was so struck with it that he adds the following observations:—

"I particularly asked several diligent students who had attentively examined the patient, if it were not the left side which "had been paralysed, instead of the right as they had told me. "But collectively and individually, they constantly replied, that "it was the right; hence it is evident to me that paralysis sometimes takes place on the same side with the injury of the "brain."

Case 8.—"A soldier, aged 33, in consequence of chagrin, was seized with agitation and general delirium. At the end of a month these symptoms subsided, but his intellect was much weakened. This state was succeeded by irregular attacks resembling epilepsy. At the end of eight months, the patient entirely lost the power of speech, and three weeks afterwards he fell into an apoplectic state, with loss of sensation and motion. On the second day, the *left* arm was in a paralytic state, but its sensibility remained, and when it was pinched, the patient employed his right hand to pull away that of the person injuring him. He remained in this state until the 4th day, and then died.

The dura mater was found closely adherent to the arachnoid, covering the brain on the anterior half of the outer side of the *left* hemisphere; the former was covered with a soft, membranaceous production, and the latter was much thickened and adherent to the brain. Below, the brain was softened in a space of about two cubic inches, and reduced to a kind of pulp whiter than the medullary substance of the brain, and diffluent in the centre. This alteration did not extend to the left ventricle, which was empty; the right contained a little serum, and all the hemisphere of that side was sound."

If any doubts remained on the point we wish to establish, the observation above detailed would serve to dissipate them. In it we see, on one hand, paralysis of the left arm without loss of

* Morgagni in Valsalva's Works, Lett. 13. No. 25.

sensibility; on the other, softening of a large portion of the hemisphere of the same side.

The seven cases here brought together prove incontestably that paralysis may exist on the same side with the lesion of the brain giving rise to it.—They shew us :—

1. "Six cases in which the injury and paralysis were both on the right side, and in one only on the left. 2. Three cases in which the injury was hemorrhage in the substance of the brain; one case of effusion in the cranium; and three cases of softening of the brain."

Why do the cerebral injury and the paralysis sometimes exist on the same side? On what causes depends this exception to one of the most general principles of pathological physiology?

From the time that Aretæus had declared that paralysis took place on the side of the body opposite to the injury of the brain, the explanations of this problem were always false and often ridiculous, until Mistichelli discovered the decussation of the fibres of the medulla oblongata previous to their reaching the brain. From this structure the occurrence of the circumstance became intelligible. In our own times this fact, overlooked by many great anatomists who doubtless were unable to verify it, has been indicated by M. Portal, and satisfactorily demonstrated by M. Gall, to whom many writers have erroneously ascribed the discovery.

It is doubtless on this peculiarity of structure, that those who have most recently written on apoplexy have grounded the opinion, that apoplexy *cannot* exist on the same side with the disease of the brain. But even the study of the organization of the spinal cord will not allow us to admit so exclusive an opinion. In fact, among the fasciculi composing this organ, the anterior which decussate before reaching the brain contain some fibres which do not appear to cross; whilst the posterior and lateral ones do not present any manifest decussation. These details, well expressed by M. Gall, had not escaped Morgagni, who says, at the end of the seventh observation we have quoted :—"Al-
"though there is a great number of fibres prolonged from each
"hemisphere of the brain into the spinal cord, and thence into
"the nerves, it is by no means certain that they all decussate.
"It is probable that there are certain portions of the hemis-
"pheres, the fibres of which pass directly into the spinal cord
"and its nerves without crossing, and that these are the parts
"affected, when the paralysis exists on the same side with the
"injury."

However plausible this explanation may appear it is not free from all objection. We know that in the middle of the anterior columns of the spinal cord, which, by their expansion, form the

hemispheres of the brain, only a small number of fibres reach the brain without decussating; consequently, these fibres can only terminate in a few parts of the hemispheres. But the observations which precede present us with alterations, several of which occupy a considerable extent. The fourth shews an erosion of the right optic thalamus; the fifth three excavations in the right hemisphere, an effusion of blood in the optic thalamus, and a softening of the corpus striatum of the same side. In the sixth and eighth, one of the hemispheres was softened to the extent of two cubic inches. It is impossible to suppose that in all these places there exist only fibres which do not decussate; for daily experience shews us lesions of the same parts, accompanied by paralysis on the opposite side. We must allow that this objection is very forcible, and that we do not see how it can be answered in the present state of the science. If it were allowable to hazard a conjecture, we should say, that important anatomical varieties often occur in the human body; that in the individuals whose cases we have related, the decussation of the fibres of the medulla oblongata might either be considerable, might scarcely exist, or even not at all; and by this hypothesis the phenomena observed would have been accordant to their natural order. Be it so or not, we do not attach any importance to this explanation, which is itself but a supposition.

Whatever may be the real cause of the fact with which we are occupied, its existence is not the less proved by the seven cases which we have brought together, and that was our principal object.

ART. VI. *A Treatise on Stricture of the Urethra; designed as a Manual for the Treatment of that Complaint, and addressed chiefly to Students and Junior Practitioners.* By GEORGE MACILWAIN, Member of the College of Surgeons, &c. &c. pp. 138. Anderson, London, 1824.

We have been very agreeably disappointed in the perusal of Mr. Macilwain's book, for we honestly confess that we took it up with a mixed feeling of apprehension and suspicion, naturally arising from the egregious quackery both regular and irregular, which we find so frequently attached to the subject of stricture. Mr. Macilwain has perfectly succeeded in steering clear of any possible imputation of that fault at least, and though his modesty

has induced him to address his little treatise to students and young practitioners, we are inclined to believe that it will be found to contain some novelties of importance, and many observations and suggestions which, though not positively original, have either not received a due share of attention, or have not been viewed in a correct point, by the bulk of the profession: of these we shall attempt to give a compendious abstract.

Mr. Macilwain is not a partisan of any exclusive mode of treatment, which we think no small recommendation; on the contrary, he assures us in his preface, that his object has been to ascertain and to point out the particular plans of treatment most suitable to particular cases. Mr. Macilwain considers that strictures are more common in the membranous part of the urethra, and especially immediately posterior to the bulb, than in any other part of the canal.

"It is stated in some books that strictures frequently happen at the bulb; if by this we are to understand the part of the urethra actually covered by the posterior extremity of the corpus spongiosum, I confess my experience leads me to think differently.—That the urethra does become narrower at this point must be admitted, but by no means, I think, so frequently as has been represented." p. 2.

We shall not detain our readers by recapitulating at length the generalities of the subject, such as the form of strictures, the age at which they occur, &c., matters treated of in all systematic works; except as regards some of the causes, viz., gonorrhœa and injections.

"There is no cause to which strictures are so frequently referred as gonorrhœa; but whether it exerts so extensive an influence in their production as is generally supposed, may be fairly questioned. Stricture often takes place at a period very remote from the existence of any affection of this kind, and in patients who never had gonorrhœa in their lives, &c. p. 55."

Although he admits that injection may give rise to strictures, Mr. Macilwain cannot agree to relinquish their employment. The experience of Mr. Hunter shewed that strictures occurred as frequently after gonorrhœa treated without injections, as with them; Mr. Macilwain is inclined to believe even more so, and for the following reason; that diligent investigation shows that stricture does not commonly proceed from violent inflammation, but from a sort of moderate but continued irritation, principally characterized by increased sensibility, and sometimes attended by discharge. Now Mr. Macilwain very rationally argues, that if by any means this morbid irritability be removed or prevented, the chance of the subsequent occurrence of stricture will be materially diminished; such means are injections, when properly

employed, as by removing the irritation and discharge, they, so far from exciting stricture, become actually indirect preventives. To guide and assist the student in the use of injections, Mr. Macilwain has briefly exposed the principles of their employment in a few concise and sensible rules.

"First, they should never be used whilst there is pain in micturition; 2dly, their quality should never be of such a nature as to produce more than a temporary smarting; 3dly, their strength should be increased as the canal becomes less sensible; and lastly, their action should be confined to the seat of the disease."—p. 7.

Irritable Urethra.—Stricture of the urethra is for the most part preceded by a state of the canal, which Mr. Macilwain calls the Irritable Urethra, and to which both as a cause and as a concomitant of the disease, he justly attaches considerable importance. The morbid sensibility which is its principal feature may affect the whole canal, or be confined to one portion of it; in the latter case almost invariably that part enveloped by the prostate gland. In cases of irritable urethra, the stream of water varies in size remarkably at different times in the same case, this variation being much greater in extent than is ever observed in cases of stricture, and thus serving as a means of diagnosis. Another symptom consists in involuntary emission, which though occasionally attendant on stricture cannot be considered as a common occurrence; whereas in simple irritable urethra nothing can be more frequent. The difference of the symptoms and the mode of forming a distinction are well illustrated by the following

Case.—"I had occasion to examine the urethra of a patient who consulted me for symptoms which rendered him confident that he had stricture. On his informing me, that since he had employed the measures recommended to subdue irritation, his stream had been, on some occasions, as large as natural, I recollected that he had not complained of involuntary emissions. On making inquiry as to this point, he said that he was very frequently troubled with their occurrence. Examination detected a very highly sensitive prostatic urethra, but no other stricture."—p. 10.

Irritable uthera, besides giving rise to symptoms resembling those of stricture, sometimes induces others, which are occasional attendants on that complaint, such as abscess in perinæo, enlargement of the testicle, and hydrocele.

Treatment of Irritable Urethra.—In the treatment of irritable urethra, Mr. Macilwain remarks that there are some cases in which change of air, and attention to the general health, are alone necessary, and others in which nothing else will relieve the symptoms. In general, however, he states that the treatment consists in the introduction of instruments, upon a prin-

ciple not altogether previously unknown in surgery, but first applied to the urethra by Mr. Abernethy. It consists in diminishing the morbid sensibility of the canal by the application of a mechanical stimulus, in the same manner that we expose ulcers and other diseased surfaces to the action of a chemical stimuli. The rules to be observed in employing this treatment, are in principle precisely the same in both cases, and of extreme simplicity. We must commence with the lowest possible degree of excitement, employed at distant intervals, gradually increasing the activity and frequency of the application in proportion to the diminution of morbid sensibility. In the instances before us, after the employment of certain measures calculated to subdue irritation, Mr. Macilwain recommends the introduction of a polished elastic gum instrument, to be repeated at intervals suited to the state of sensibility of the urethra. At the commencement, once a week will be sufficiently often; afterwards, twice in the same period; and in the end, as metallic instruments generally produce more irritation than those of elastic gum, they may be advantageously substituted. The introduction of a very large or very small instrument should be equally avoided, as being productive of an unnecessary degree of irritation. Mr. Macilwain recommends us to commence with No. 10. On a first introduction it should only be allowed to remain in the canal for a few seconds; the time is to be gradually prolonged, so that at last, it may remain a few minutes with advantage.

Instruments.—Having alluded to the subject of the introduction of instruments in this particular form of disease, Mr. Macilwain devotes a chapter to the consideration of the principles which should guide us generally in their employment.

"Whatever the composition of an instrument may be, its form should be cylindrical; since, if it be conical, and its passage be obstructed, we are at a loss to know if the obstacle impede the point, or whether this may not have passed a stricture which is incapable of admitting its increasing diameter. An elastic gum bougie should never be employed without a wire in its centre, or some other contrivance to give it a certain degree of fixity of form; without this it is impossible to have a complete knowledge of, and controul over its point, on account of the tendency of the instrument to straighten itself in its progress through the canal. Gum catheters are often sold in the shops, with the stilettes so small, as to be scarcely of any use, which is worse than having none at all; since, in the latter case, the conviction that we cannot controul the direction of the point, prevents us from using any force capable of doing mischief."—pp. 17-18.

The catheters commonly found in the shops do not appear,

as regards the curvature at least, to be made on any other principle than the fancy of the maker; they are, almost universally, too much curved. Mr. Stanley, Demonstrator of Anatomy, at the School of St. Bartholomew's Hospital, has the merit of suggesting, and putting in practice, a considerable improvement in this particular. Guided by correct anatomical knowledge, he has caused to be constructed, and employs instruments possessing a curvature precisely corresponding to the natural curve of the membranous part of the urethra, where it passes under the arch of the pubis. This curve forms a considerable segment of a circle about one and a half or two inches in diameter; the remaining part of the instrument is straight. Mr. Macilwain bears testimony to the advantages this form possesses over every other, and we conceive that the profession are, in no small degree, indebted to him for having been the means of making an improvement of such importance more generally known. It is right to state that he has given a plate which will give a much more perfect idea of the instrument in question, than any verbal description could convey *. He adds that he has seen M. Larrey introduce a catheter still less curved than Mr. Stanley's; but it is evident, that in such a case, all the advantages must be lost arising from the correct adaptation of the instrument to the natural curvature of the urethra.

We do not think it necessary to follow Mr. Macilwain through the directions which he has given for the introduction of instruments under different circumstances, as we conceive the greater part of these are familiar to surgeons in general. The same remark is, in a great degree, applicable to the symptoms of stricture, and we shall therefore at once proceed to the consideration of the treatment.

Treatment of Strictures.—Mr. Macilwain commences by stating—

That the principles on which the treatment is founded have varied considerably. In general the object has been either mechanically to dilate the contraction; to remove it by the application of substances, of which the precise action is undeterminable; or lastly, to destroy it by caustic. Dilatation may be effected either quickly by instruments called dilators, or gradually by the introduction of bougies, &c. Mr. Macilwain gives a decided preference to the latter, for the following reasons: dilators can never be used, except when the stricture will admit an instrument, however small; and then the restoration of the canal can be easily and fully effected by other means; secondly, because he supposes that bougies act not only mechanically, but vitally, by inducing absorption, or even ul

* A copy of this plate is inserted in this Number of our Journal.

ceration, especially where those changes have occurred, which attend cases of any considerable severity and duration; and lastly, because of the greater facility and certainty of their application."—pp. 38-9.

He agrees with every prudent surgeon in unequivocally condemning attempts at overcoming the obstructions in stricture by thrusting a conical catheter, or other instrument, onwards; a mode of practice which has not received any encouragement from the practitioners of this country. In the cure by dilatation, Mr. Macilwain prefers the elastic gum, to the common wax cloth bougie, except for the purpose of taking the impression of the stricture. He grounds this preference on its greater smoothness, on its being less likely to be detained by spasm, or to be turned or indented by meeting with a firm, narrow stricture. He objects to flexible metallic bougies, as being too little flexible to have any advantage over the elastic gum, and too much so to supply the place of a firmer instrument. Of all metallic instruments, he prefers the silver catheter, from the polish and uniformity of its surface, its lightness, by which we may judge with accuracy of the force employed, or the obstacles opposed to our progress; as well as the assurance of having entered the bladder by the escape of urine.

Lunar Caustic.—Of the lunar caustic Mr. Macilwain speaks in terms of general disapprobation, although he allows that there is a certain class of cases in which its application proves beneficial. But we are rather surprised to find, that like the French surgeons, who entirely discard it from practice, the nitrate of silver is, by him, considered only as a caustic, and as positively destroying the surface to which it is applied. Mr. Abernethy has long been in the habit of explaining, that much advantage may be derived from its action as a local stimulant, capable of changing the actions of the diseased surface of the urethra, in the same manner as certain caustics and similar remedies operate on the mucous surfaces of the eyes, on ulcers, &c. If the lunar caustic be applied in a manner and for a time insufficient to produce its escharotic effects, the consequence is that it is decomposed, and forms a white, tenacious film with the mucous secretion of the urethra, &c. This film has often been mistaken for a slough, but we believe that to produce the death of any part of a mucous surface, the lunar caustic must be applied for a time, and in a quantity much greater than is generally supposed. The same observations are applicable to the kali purum as recommended by Mr. Whately, of which Mr. Macilwain appears to entertain a more favourable opinion. In this instance the decomposition is still more evident, and we

believe that the good effects resulting from the use of both remedies in the majority of cases, consist in the local stimulus inducing altered actions in the diseased parts. It is by no means our intention to deny that the nitrate of silver may be so managed as to act as an escharotic, but we believe this can seldom be either prudent or necessary.

In the treatment of ordinary cases the objects in view are: first, a restoration of the canal to its ordinary diameter; secondly, security from the supervention of unpleasant symptoms during the treatment; and thirdly, prevention of the recurrence of the disease. In order to effect the second object, Mr. Macilwain lays much stress on the gradual progress of the treatment, and sets it down as a general rule, that so long as the amendment is progressive, the surgeon and patient should be satisfied. He considers it difficult, and often impossible, to prevent the recurrence of the disease, and we believe, that such is the general opinion of the present day: nor can this be wondered at; the causes of stricture are almost invariably constitutional; and, as in spite of our best directed efforts those causes will often continue to operate, we must not be surprized that their natural consequences should succeed.

The treatment is of two kinds, constitutional and local; the former consists in attention to the state of the bowels, to diet, &c.; in short, it is the system so successfully employed by Mr. Abernethy: the latter, in the cautious and persevering introduction of instruments for the purpose of effecting gradual dilatation.

Our limits do not permit us to notice all the contents of Mr. Macilwain's book; we shall, therefore, pass over the chapters on the application of kali purum; of the nitrate of silver; of long stricture; retention of urine; abscess in perinæo, &c.; and make a few extracts from his remarks on the removal of strictures by incision, a mode of practice which has of late excited considerable attention.

Incision.—After giving a short sketch of the condition and sufferings of patients with aggravated strictures, Mr. Macilwain proceeds:—

"In such cases the surgeon must adopt one of three plans; he must endeavour to overcome the stricture by forcing an instrument through it; he must wait until retention of urine takes place, and then puncture the bladder; or he must cut down to the stricture, divide it, and introduce an instrument into the bladder."—p. 103.

As we have mentioned, he has already decided against the first plan; and as to the second, besides the uncertainty of the

period at which it can be performed, the degree of relief that it affords is but limited.

"Mr. Hunter divided strictures: he seems, however, to have confined the operation to cases where false passages had formed, or where the urethra had ulcerated posterior to the stricture."—p. 104. "This operation has been latterly revived, and I scarcely know to whom we are indebted for it. The first patient thus treated that I saw or heard of, was one on whom the operation was performed by Mr. Stanley; who has since repeated it, with, I believe, uniform success. Mr. Shaw, of Windmill-street, appears, however, to have been performing similar operations about the same period. Vide Med. Chir. Trans.—Vol. xii. p. 105."

We may here state that we have lately seen the particulars of a case in which this operation was successfully performed, forty years since; in it, however, no attempt was made to re-establish the canal of the urethra after the incision of the stricture, and consequently the urine passed, and still continues to pass through the opening remaining in the perineum. A period of between six and seven years has elapsed since we witnessed the performance of a similar operation in a case of obstinate, indurated stricture, complicated at the time with imperfect retention of urine, but without any fistulous openings in the perineum. In this instance, the canal of the urethra was permanently and completely re-established, and the whole event of the case well merited to be ranked among the most brilliant results of operative surgery.

The Operation.—For performing the operation in question, Mr. Macilwain gives the following directions:—

"The patient should be secured as for the lateral operation of lithotomy. The operator first passes a grooved staff down to the point of obstruction, in which situation it is to be securely held by an assistant; he now cuts through the external parts down to the point of the instrument, and having accomplished this, continues his incision through the stricture. The next object is to convey an instrument through the wound into the bladder, for which purpose the staff should be withdrawn and an elastic catheter introduced in its place."—pp. 105-6.

To obviate the difficulty of distinguishing the urethra from the wound, and the necessity of introducing an instrument from the wound into the bladder, Mr. Macilwain recommends the employment of an elastic gum tube, twice the length of the ordinary catheter; for then so much can be drawn through the anterior part of the urethra, as will enable the surgeon to turn round the point and direct it to any part of the wound with the same facility as if it were a separate instrument. When it has passed into the bladder, so much of its length should be with-

drawn as to leave that ordinarily given to catheters, and the superfluous portion cut off.

"It is right," says Mr. Macilwain, "to leave the instrument in the canal for several days at least, in order that the parts may have every opportunity of healing over as quickly as possible. If it be withdrawn at an earlier period, considerable difficulty may be experienced in again introducing it into the bladder."—p. 107.

There is one case in which this operation might be more difficult of execution than usual, viz. where the fat, cellular tissue &c. in the perineum are much thickened and diseased from the previous occurrence of abscess and fistula in perinæo.

"In an individual so situated," says Mr. Macilwain, "the parts would have become so changed in structure and appearance, that the most expert anatomist might be foiled in his attempts to discover the urethra, as is reported to have happened to Desault." —p. 108.

We have been induced to dwell upon this operation from a strong conviction of its value and importance, and perfectly coincide with our author in believing

"That it will in time be performed much more frequently than it has hitherto been; and in many cases supersede a long course of treatment by bougies, catheters, caustic, and other remedies, which though ultimately successful, are frequently as painful and annoying to the patient, as they are distressing to the surgeon."—p. 108.

The remaining part of the work consists of remarks on stricture in the female, and cases which do not require any particular notice; we shall therefore conclude our analysis with a general expression of our sense of the merits of the book, and a recommendation of it to the notice of the surgical part of our readers.

ART. VII. *Practical Observations on the removal of every species and variety of Cataract, by Hyalonyxis, or the Vitreous Operation, illustrated by Cases; with critical and general Remarks on the other Methods employed.* By JOHN BOWEN, M.D. &c. pp. 120. London, 1824.

We have long been in the habit of supposing, that one of the greatest advantages arising from the particular attention paid, during the last thirty years, to diseases of the eye in general, and cataract in particular, consists in the adoption of different modes

of treatment and plans of operation, as they might happen to be best adapted to the circumstances of individual cases. With this impression on our minds, we took up Dr. Bowen's treatise with a feeling of considerable curiosity, from the positive manner in which its title page recommends an exclusive, and that apparently, an unknown operation for the removal of every kind of cataract. The difference of Dr. Bowen's sentiments from those we entertain is not less striking in the body of his work than in the title page: he considers it an extraordinary circumstance that

"Notwithstanding the operation for the removal of cataract has been performed for so many ages, no *one* fixed and determined method of operating has been adopted as a guide to the young surgeon or general practitioner. We find one professor an advocate for extraction; another for depression; a third for keratonyxis; a fourth for disturbing the lens and allowing it to absorb *(to be absorbed)* in situ. Those in the habit of operating much, act agreeably to circumstances; solid cataracts they extract—soft and fluid they disturb."—pp. 3-4.

We have no intention to deny "that such a variety of methods, adopted agreeably to the circumstances of the case, must render this subject always more or less complicated," and that it may be "a desideratum to point out some general method of removing the lens, by which we may act discriminately in all cases;" the question before us is, has that desideratum been attained: Dr. Bowen answers in the affirmative, but our readers must decide. Previous to the description of his peculiar mode of operation he has thought it necessary to enter upon the subject of the causes of cataract, and as far as we can see, without communicating any thing new or original on the matter, and without any other object than that of spinning out a few additional pages. We beg pardon of Dr. Bowen, when we say that there is not any thing new or original in his account of the causes of cataract; we have no doubt that his claim to the following brilliant idea is indisputable:—

"I am inclined to believe that wherever sulphureous matter is found largely diffused in nature, consequently entering into the composition of all animal and vegetable substances, may be one of the causes." (What may this mean?) "This opinion seems further confirmed by facts; for if we examine the inhabitants of Naples, the towns near Mount Vesuvius, the whole of Sicily, we shall find the blind proportionably greater *(more numerous)* where volcanic matter predominates."—pp. 8-9.

Of the whole chapter on the causes of cataract, it may be justly remarked, that whilst it has not the slightest pretension to merit in a systematic or a scientific point of view, it is much too long,

and altogether misplaced in a work which treats, or is intended to treat only of a particular operation. The same considerations are in a great degree applicable to the remarks on the propriety of removing the cataract at an early period. The author appears to have in a great degree misapprehended the question. No one at the present day, as he chooses to have it believed, waits until a cataract shall have become, as he calls it, ripe, previous to performing an operation. If cataract commence in both eyes at once, the operation may be undertaken at any period; but if one eye only be affected, the attempt at cure is at least a matter of choice, and in many cases it admits of a doubt whether the advantage to be gained is so great as to counter-balance the possible and the inevitable inconveniences attendant upon an operation. The propriety of operating in such cases certainly admits of a question, and can only be determined by the feelings of the patient, and the peculiar circumstances present; but we believe there cannot be a greater misrepresentation, whether intentional or accidental, than in stating that surgeons of the present day defer operations for cataract, existing in both eyes at the same time, until they become what is vulgarly termed, ripe. If this be the case, what are we to think of Dr. Bowen's pathetic remarks on abandoning an unfortunate creature, because the whole of the lens is not opaque, and of the merit he takes to himself for breaking through the barriers of prejudice?

Operation of Hyalonyxis.—But to come to the subject before us: for performing the operation of Hyalonyxis, (from υαλος, glass, and νυσσω, I pierce.) Dr. Bowen employs a needle, the length of which is one line less than the diameter of the globe of the eye; it is lancet or sharp pointed, has two cutting edges near its extremity, is slightly convex, and of the same diameter from the cutting edge to the handle.

"The patient being seated, so that the superior part of the head does not reach higher than the superior part of the sternum of the operator, he takes his needle, previously besmeared with oil, as a pencil or writing pen, placing the weight of his hand on the cheek of the patient."—"The patient being directed to turn the eye towards the nose, the needle, with its convex surface forwards, is boldly introduced into the globe of the eye through the sclerotic, three lines or three and a half from the transparent cornea, and a line below the transverse diameter of the pupil. The instrument passes into the vitreous humour, (whence the name Hyalonyxis,) posterior to the lens and its capsules: the point of the needle is then brought forwards, from inclining the handle to the temple, and penetrates the posterior capsule. Should the lens be soft or fluid, the needle passes through its centre on its passage to the anterior

chamber; if solid, the instrument should be directed to its superior part, and by gently elevating the handle, the lens will be sufficiently depressed to allow the instrument to pass between it and the ciliary processes; it is then carried through the anterior capsule and pupil (previously dilated by belladonna) into the anterior chamber without any risk of wounding the ciliary ligament, iris, or ciliary processes. The object in view is the laceration and removal of a portion of the anterior capsule, of greater extent than the pupil in its natural state; this is effected by three or four circular movements of the point of the needle, which should invariably be done (made.) The transparent or opaque portion of the capsule should be conducted backwards and downwards with the lens, and buried in the vitreous humour, below the margin of the iris, and as much as possible removed from the front of the pupil. On withdrawing the instrument a circular movement is similarly made with the point, for the purpose of removing every portion of the posterior capsule, which is also liable to opacity; so that a communication is established between the vitreous and aqueous humours; the lens, anterior and posterior capsules are now removed, so that the utter impossibility of secondary membranous cataract forming must be evident."—pp. 42-6.

Such is the operation for a solid cataract enveloped by its capsule—but if the lens be fluid, semi-solid, or curdy; we are directed, "instead of quickly finishing the operation to remove the solid particles of the lens by several movements of the needle, as much as possible from the axis of vision, either by depressing them into the vitreous humour, or bringing them into the anterior chamber."—p. 47.

Dr. Bowen states, that he has occasionally met with the lens united firmly to both capsules, forming as it were one solid body, and in such cases he recommends that it should be freely punctured, in order to ensure its absorption, which would not otherwise be effected.

The remainder of Dr. Bowen's book is lengthened out by remarks on the diagnosis and prognosis of cataract extracted from the statements of Beer and others, as given by Mr. S. Cooper in his Surgical Dictionary. We are at a loss to understand the necessity of this proceeding in a treatise upon an operation, the avowed object of which is to render diagnosis unnecessary. As to the operation itself, its claims to novelty are but slight; it is in fact, the posterior operation of division, performed with a particular kind of needle, introduced at a greater distance than usual from the margin of the sclerotica: whether or not it possesses any peculiar advantage, is a point on which the experience of others can alone decide. Dr. Bowen makes another statement, which we confess appears to us incomprehensible, if not incredible: viz. that in three years, in Italy, he has operated on

160 cases of cataract: an explanation of this would be desirable: we believe, that in general, a long time must elapse before any one can make such a boast; but what are we to think of it when we reflect that all this happens to Dr. Bowen in a foreign country, and without his being attached to any public institution? Is the doctor an itinerant occulist? Or are there not any operators on the eye in Italy? As to the kingdom of Naples, we may answer the question in the affirmative, for the Doctor, in connection with his notable doctrine of the effects of sulphureous emanations in producing cataract, informs us that —"the government contributes to support or aid gentlemen in their studies, particularly for the acquirement of knowledge of diseases of the eye." The Doctor has subjoined twelve or thirteen cases, but how he came by the other hundred and forty-seven or eight, or who they were, or where they happened, we are not informed. To say the least, the number is very extraordinary, and throws an air of doubt and suspicion over the whole work, in spite of the quoted authority of Assalini and other surgeons of note whom he mentions.

ART. VIII. *Observations sur le Nature et le Traitement de l'Hydropisie;* par. M. PORTAL. Premier Medicine du Roi, &c. &c. &c. 2 Tomes 8vo. pp. 823. Paris, 1824.

This work of the celebrated Portal, the modern French Hippocrates, is entitled to, and shall obtain, a due share of our attention. Some of our drastic practitioners, indeed, may smile at several of his doctrines and modes of practice: but the opinions of a man who, for the last sixty years, has been considered as high authority in medicine, are not to be passed over slightly on that account. And if his practice has been almost uniformly successful, is it the less worthy of being imitated, because he may have occasionally attributed its success to the correction or evacuation of peccant humours? At present, indeed, there seems to be a strong leaning to revive that obsolete notion.

The author considers his work as a mere sketch, which he leaves to some abler man, who may be convinced of the justice of his views, to render more perfect and introduce more generally into practice. He has divided it into two parts: the first treats of dropsy in general; the second of dropsies as they occur

in different parts of the body. We pass over the general symptoms and prognosis of dropsy, and the greater part of the *post mortem* appearances; extracting merely that part of the latter, which notices the condition of the blood in hydropic patients.

State of the Blood in Dropsy.—"The quality of the blood observed in the bodies of such persons is by no means uniform; and it is not generally met with in a dissolved state; and we should not believe that all the vessels are at all times empty of blood, a circumstance which authors have often laid down as a constant fact. We have several times found that the white, or lymphatic part of this liquid had firmly coagulated in them, as well as in the cavities of the heart; and that it was even in great abundance there, with but a very small quantity of serum. In some subjects we could scarcely observe any of the red part there, whilst in others, there was much serosity, although the albuminous part was very much concreted. We have not, then, always found the blood-vessels of hydropic patients full of a watery fluid, as some authors have pretended to have done. This, our observations have not confirmed; on the contrary, they have proved, in general, that the blood was in a state of coagulation, and of a black colour in the heart, and in the greater number of the vessels, but more particularly so in the auricles and the *venæ cavæ*. This excess of concretion appears to be owing principally to the albuminous part, which is found, indeed, in a coagulated state in the lymphatic vessels and conglobate glands of many dropsical patients. How interesting would it be, since the examination of hydropic blood gives such variable results, to obtain more accurate information on this subject; to learn what occasions these differences, and whether they have any connection with the causes of dropsy. We might inquire, for instance, if in dropsy proceeding from suppression of insensible perspiration or of urine, the serum of the blood be in greater quantity than usual; if in dropsy from a scrofulous or venereal taint, the albuminous part of the blood be not coagulated; if, in dropsy from a scorbutic taint, the red part be not lessened, attenuated, dissolved, or if the waters of hydropic patients, when the liver has been injured in its structure or its functions, have not a peculiar character: for example, a greater yellowness or a darker colour than they have naturally; or whether they are more fluid in petechial diseases, after cutaneous eruptions, &c. Positive information on these different points would necessarily throw light on the nature and treatment of dropsy."—Vol. i. pp. 27-8.

Cause of Dropsy.—M. Portal next inquires what is the immediate or proximate cause of dropsy. It injures, in most instances, the excretions, and not the secretion of fluids; but we know too little of its nature to be able to draw any conclusions from it relative to the cure of dropsies.

"We may say," he observes, "that the secretion, the absorption, and the excretion of serosities, proceed from a kind of sensibility and

irritability, the nature and degree of which cannot be defined in the natural state, but which are doubtless the same in all persons who enjoy perfect health; whilst, on the contrary, they are continually varying in a state of disease. But whence happens it, that the secretions of serosities continue to go on, whilst the excretions are diminished or suppressed? This is unknown to us, and probably will be so always."—p. 31.

We are much better acquainted with the mediate or remote causes; and it is upon a knowledge of these, that physicians of the greatest eminence have founded the cure of dropsy. Following their footsteps, and arranging dropsies according to their remote causes, our author has divided them into *thirteen Classes.* To avoid repetition, we shall speak of those successively without giving a general enumeration of them.

First Class of Dropsies.—In this class are comprehended those dropsies which have their origin from a deficiency or a superabundance of excretions.

"Those dropsies which arise from a deficiency of insensible perspiration, are of most common occurrence; and this will not appear wonderful, when we consider that of eight pounds of aliment, which we take, nearly five are dissipated in that way, if we include what is lost by expiration. Dropsies from this cause would be even more common, were the diminution of insensible perspiration not compensated for by the increase of some other excretion. If the disease is inconsiderable and recent, and if it is occasioned merely by a simple lessening of insensible perspiration from cold or humidity of the atmosphere, or from some slight affection of the body, it may be easily removed by the prudent exhibition of diaphoretics and sudorifics: for such, in general, is often the most useful practice in incipient dropsy.

"A gentle diaphoresis may be induced by drinking an infusion of the flowers of borage, elder, and wild poppy, or taking a few grains of kermes mineral, or the purified juices of boraginous and diuretic plants; those, for instance, of the leaves of borage, bugloss, pellitory of the wall, and chervil. To six or eight ounces of these juices, from fifteen to twenty-five grains of nitre may be added, which may be taken in two doses; and if this remedy does not act as a diaphoretic, it sometimes acts usefully as a diuretic. If necessary, we may likewise add to it an ounce of the rob of elder; and if this is not sufficient to excite both insensible perspiration and urine, we may give in addition to it, half an ounce, or an ounce of oxymel of squills. The medicine must be continued for a longer or shorter time. If there is no fever, nor too much sensibility, or irritability, in old people particularly, subject to catarrhal affections, we may sometimes prescribe ptisans of sudorific woods, such as sassafras, sarsaparilla, Chinese smilax, guiacum. The patient should keep in bed for a considerable time, to encourage perspiration, and when he gets up he should be warmly clothed, and should not go out of

doors but when the weather is dry and warm. Perspiration may be also encouraged by having the trunk or limbs rubbed with dry flannels."—pp. 34-6.

In the above extract, there is certainly nothing very novel or luminous, but it will give the reader some idea of our author's manner. He acknowledges, however, that these remedies will not cure the patient if there be disease in any internal organ. Dropsy from diminution or suppression of urine is very frequent; and it is not uncommon when alvine evacuations are suddenly lessened or retarded. Our author in exemplification of the latter, gives the interesting case of the Countess de B. in which Tronchin and Barthez, in opposition to his advice, suddenly stopped an habitual alvine evacuation, to the great detriment of the patient.

The instances of dropsy occurring after *excessive evacuations* are numerous; and M. Portal gives us the history of several which occurred under his own eye. He seems to have a particular horror at stopping rashly any cutaneous or other discharge to which the body has been long accustomed; and he has not failed to enumerate various cases, in which other practitioners had interfered with his lenient measures, and produced fatal consequences. We extract his observations on the effects of long and copious sweats.

"They first of all," he says, "emaciate the body, and in the end often occasion œdema, and general dropsy or effusions into some cavity. This excretion may be diminished by the use of bitters, and more especially, peruvian bark, which indeed is most proper in the commencement of dropsies after great evacuations. With bitters we have often combined antiscorbutics, nourishing food of easy digestion, and bitter wines; and generally with advantage. In such cases, opiates are for the most part hurtful."—p. 52.

Second Class of Dropsies.—In this class is included dropsy, which occurs during the course, or at the termination of different fevers.

"Sometimes," says M. Portal, "the first of these is so dependant on the other, that if you cure it, you also remove the dropsy. I have been occasionally so convinced of this, that notwithstanding the presence of anasarca, obstructions of the liver, and even jaundice, which had preceded the fever, during which the dropsy had occurred, I have thought it my duty, seeing the danger of an increase of paroxysms, to prescribe bark instantly, and in a large dose, in order to check its progress. This remedy, as I expected, not only cured the fever, but, instead of deteriorating the causes from which I believed it to proceed (infarctions of the abdominal viscera), it actually assisted in removing them, the patients having afterwards enjoyed perfect health."—p. 53.

Corroborative of this practice, we have the cases of the Marchioness of Vilette, and of the lady of General Clausel, one of whom had a hard tumefied liver, and the other comatose symptoms. The author is desirous that this mode of treatment should be generally known, as it may, he thinks, be the means of saving many lives.

Third Class of Dropsies.—This class includes dropsy from plethora of the blood-vessels, and from the inflammation and suppuration of different parts of the body.

"Dropsy from plethora," says M. Portal, "occurs in a particular manner among plethoric young women, who have difficulty in menstruating, or who, after having menstruated for some time, have their menses suddenly suppressed. It often happens also to women, who, from some cause, have suddenly been deprived of the menstrual discharge, particularly before the time prescribed by nature. It sometimes also takes place in young people, who, after having been long habituated to epistaxis, have the discharge suddenly suppressed without any previous gradual diminution; and particularly when there is no increase of other excretions to prevent plethora and its troublesome effects. Nor are persons advanced in life exempt from it, after the suppression of any considerable hemorrhoidal flux; and several others have become dropsical from a similar cause, either, because the water which formed the dropsy had escaped from the blood-vessels, into the surrounding cellular substance, by the compression which these very vessels, too much loaded with blood, made upon the nerves and lymphatic vessels which accompany them; or in any other unknown manner, sufficient to cause dropsy. However that may be, before the disease makes its appearance, and even after it is fully established, the pulse is full, large, and hard; there is heat in the palms of the hand, in the soles of the feet, and in the face, especially after even a very slight meal, and in the evening as well as in the night time: in such a case blood-letting is very often of the utmost service. At Montpelier, says Sauvages, we have seen a dropsy which was exceedingly aggravated by an abuse of hydragogues and by every kind of diuretic. The patient was not cured till he was put upon a course of whey, and had been bled twenty times.—We do not quote this case as any thing extraordinary; but it ought to be taken particular notice of by those persons, (and there is a great number of them) who unreservedly interdict blood-letting in the treatment of dropsy. We confess however, that several have made by far too much use of that remedy in dropsy; which is no doubt the cause of its having fallen too generally into disgrace, even in plethoric dropsy."—pp. 57-9.

Inflammation.—After giving several instances of dropsy, from plethora of the blood-vessels, M. Portal passes to that which is the consequence of inflammation.

"It is," he observes, "extremely common; no doubt because the

infarction and induration of the albuminous juices, which are its well-known consequences, occasion a reflux of humours in the collateral vessels, whence it happens that the circulation in them is obstructed, retarded, or suspended, that that part of the serum of the blood which remains in a fluid state is effused into the surrounding cellular texture, and is thence spread into the great cavities, if it does not remain in the seat of inflammation, where it was first effused."—p. 65.

It may sometimes be induced by a neglect of blood-letting. In this kind of dropsy, all heating diuretics are hurtful; and those only should be prescribed, after venesection, which are cooling, relaxing, and slightly nitrous. Those dropsies which succeed to the ulceration of some internal organ are, except in some rare instances, mortal.

Fourth Class of Dropsies.—This class comprehends those dropsies which precede, accompany, or follow eruptive diseases with fever, as well as those without fever, which are complicated with different vitiated habits.

"When we discover any watery swelling of the skin, we ought in general to prescribe diaphoretics and sudorifics, and those diuretics which are found most efficacious in such cases, in order to render insensible perspiration more free and increase the flow of urine. These remedies agree very well in combination. Purgative hydragogues may be employed also, but with caution; for, sometimes a purgative may retard or suppress cutaneous excretions, and check the flow of urine, and delay or even prevent the success of that treatment which is usually the most beneficial in dropsy. In such a case we need not expect a cure, till the flow of urine and insensible perspiration be re-established. Blisters are generally indicated at the commencement of this kind of dropsy, and the sooner the better, when we have found out the cause from which it proceeds or may proceed; and it is better to shift them from place to place, than to keep them running. Their application seldom lessens or suppresses the excretion of urine, especially when the dropsy is fairly formed; the secretions and excretions being then diminished rather by inactivity of the urinary organs than by excess of sensibility and irritability, although the latter may have effect sometimes. When the dropsy is removed, the patient should be put upon a course of antiscorbutic tonics, bitters, chalybeates, &c. To keep up or excite insensible perspiration, dry rubbing night and morning, over every part of the body, should be recommended."—p. 75-6.

M. Portal has seen dropsy diminish, and even cease, with a very large flow of urine, or a profuse hemorrhage, as soon as an hepatic eruption had re-appeared on the skin; even in cases seemingly of great danger. Dropsical symptoms also show themselves after the too frequent use of *douches*, or sulphureous baths.

Fifth Class of Dropsies.—In this class we find dropsy from catarrhs, and from scurvy, lues venerea, scrofula, herpes, itch, &c.

"In persons of a weakly constitution and in old people, catarrhs are seldom accompanied by inflammation; on that account they last long and are very obstinate; the skin becomes dry, the urine scanty; the ancles, wrists, and face swell, and anasarca is formed by a collection of water in the cellular substance of the trunk and extremities. In the end this water finds its way into one or other of the cavities, such as the head and abdomen, but especially into the chest, because the lungs are themselves primitively puffed up and tumefied by this serum, which very readily transudes across the plura into the pectoral cavities, or into that of the mediastinum, and pericardium. But sometimes these internal dropsies take place before there be the least infiltration into the texture of the external parts. Several people have died suddenly of dropsy of the chest, mediastinum, or pericardium, without having had any œdema externally; but this is a rare case; for these pectoral dropsies are commonly announced by œdema of the wrists and ancles, which is often succeeded by a slight anasarca of the upper extremities. I have seen some cases, which were preceded by an external œdema of one or more places of the chest, and sometimes on the side where the internal effusion is situated. This is the cause of death in many old persons.—Many such cases we might mention: called, in mild rainy winters, to many cases of catarrh, we have seen several of them terminate, sooner or later, in dropsy of the chest, and in patients, who sometimes died of it very unexpectedly; and generally with a rapidity proportioned to the extreme difficulty of breathing and actual inflammation. Even old people are liable to inflammation in such cases; and we should attend to this carefully in the treatment. Taking into consideration, on my arrival, the strength of the circulatory system, if the pulse seemed to me to indicate plethora, I ordered either a blood-letting from the arm, or the application of leeches generally to the anus, but sometimes to the chest, if the patient felt any local pain there. When the hardness and fulness of the pulse were diminished, and the skin had become soft and cool, I prescribed mild emetics, sometimes repeatedly, if the state of the digestive passages seemed to require them; or I ordered them at the very first, if they were not contra-indicated by the state of the pulse. I afterwards prescribed aperients, diaphoretics, or diuretics, and of considerable activity, if the inflammatory diathesis was moderate. The same thing may be said of blisters, which are most indicated, when it is necessary to increase the action, tone, irritability and sensibility of parts; but which are improper and even dangerous, when the contrary is requisite."—pp. 82-5.

In support of the above doctrines, our author has furnished a great number of cases, which it must be owned are very favourable to his views. In the cure of scrofulous dropsy, he recommends

diuretics and antiscorbutic herbs, in conjunction with blisters and antimonial diaphoretics, and if the skin is affected with herpes he uses also the preparations of sulphur, Chinese smilax, sassafras, sarsaparilla, polygala senega, and Virginian snake root. But to be effectual, these remedies must be used at an early period.

We regret that we have not room for M. Portal's observations on scorbutic and rheumatismal dropsy, and the many cases with which he has illustrated them. The first is remedied principally by antiscorbutics; the second by the renewal of rheumatic action on the surface of the body, by the use of mild diuretics and diaphoretics, and, if the pulse be hard and full, by bleeding the patient in the foot.

Sixth Class of Dropsies.—This class includes all those dropsies which take their rise from the infarction and obstruction of organs, and in consequence of other changes. These are a real and very common cause of dropsy.

"Dropsies," our author informs us, "are not occasioned only by obstructions of the internal organs of the head, chest, and abdomen, but also by those of the trunk and limbs in any part of the body. The head and neck, for example, swell, and become puffy from various causes, such as erysipelas, small-pox, measles, and other eruptive diseases, or from oily, fatty, or other external applications. From such causes, air or water are sometimes collected, in greater or less quantity, in the cellular texture. Thus we have seen œdema of the right arm succeed emphysema, in a man whose parotid and maxillary gland of the same side were swelled and hardened. We know that the arms sometimes swell, in consequence of infarctions in the axillary glands; and that, when the inguinal and popliteal glands are similarly affected, there are gazeous or watery swellings in the lower extremities. I was called, in 1804, to visit M. ***, by M. Coad, his family physician. The patient was in his 35th year, and had naturally a strong constitution, he was complaining of dreadful pain in the inferior extremities, and in the trunk of the body; occasionally with convulsions and insensibility. It was thought that the pains were rheumatic; and as they were extremely violent, and the pulse was hard and full, blood-letting was practised freely. At the same time, cooling, softening, diuretic drinks were prescribed, and baths, and fumigations, and internal anodynes. The pains abated and ceased for some time, but they afterwards returned with redoubled violence, particularly in the evening and in the night time. They seemed to be intermittent, and to return every two days, with such violence, that the patient attempted to throw himself out at the window. He was bled against his will; and after the blood-letting and baths, &c., we had recourse to bark in large doses and in powder, without laying aside the anodyne medicines, which, on the contrary, were given in still greater quantity.

All our remedies were unavailing; and the pains became more and more excruciating.—M. Coad and I, examining the patient carefully, found a tumour of the size of a nut, on the right side of the neck, placed somewhat anteriorly, and three fingers' breadth above the humeral extremity of the clavicle. It was hard, uneven, and rather painful: we ordered it to be covered with an anodyne and emollient poultice. Meanwhile it increased in size; it became more and more painful, and grew a good deal harder. The glands in the arm-pit also became hard and swelled. The hand swelled, and the swelling extended successively to the forearm, the arm, the armpit and the neck, particularly on the side where the tumour was situated. The tumour itself increased in size, and every part of the face became puffy, but more on the left than on the right side; and an emphysema extended over the chest. Meanwhile the pains abated, but debility ensued; the pulse grew weaker, and became extremely slow and very unequal, the breathing was laborious, and the patient died with all the symptoms of hydrothorax. The body was opened, and we actually found much water in both the cavities of the chest; the heart was very large, had its texture much relaxed, with an increase of size in its sides, particularly those of the left ventricle. There were lymphatic infarctions in the mesentery; the axillary glands of the right side were very hard, uneven, red, and disposed to cancer. The brain was hardened."—pp. 121-3.

Diseases of the peritoneum very frequently produce dropsy of the abdomen. Too great a load of fat in every part of the body, is often the cause of general dropsy; and if it is confined to the abdomen, and more particularly to the epiploon, it may produce a fatal ascites. Indeed, when people are very fat, there is great reason to apprehend that they will die either of dropsy or apoplexy. It is well known that dropsy may have its seat in the stomach itself; but physicians have sometimes imagined that organ to be dropsical, when the disease was seated elsewhere.

"A lady," says M. Portal, "from the neighbourhood of Orleans, had often consulted me for different complaints, which seemed to have their seat in the region of the stomach, on account of the severe pain which she felt there, and from her having frequently vomited different kinds of stuff. She came to Paris on purpose, that I might make a more careful examination of her case. She was about 50 years of age, having ceased menstruating only a short while, though rather suddenly. On examination, I could perceive various infarctions in the abdomen, and particularly a hard swelling under the ensiform cartilage, for which I prescribed aperient remedies, and particularly the soap pills, with the bitter extracts and some grains of calomel, the juices of borage, succory, and antiscorbutic herbs, the mineral waters of Vichy, &c. These medicines were administered for about three months. The patient returned home so much improved in health, that she was thought cured; in

fact, she remained well for almost eight years; but having again become a good deal emaciated, and being troubled with colic pains, and having a slight jaundice, she thought proper to come once more to Paris to consult me. Both M. Salmaste and I, on examination, observed a considerable tumour in the epigastric region, which we thought had its seat in the horizontal lobe of the liver; and the tumour at any rate extended into the liver. The patient's skin was yellow; sooner or later after eating, she always vomited her food. Numerous remedies were prescribed for a long time to no purpose; and during their employment, the inferior extremities became so œdematous, and swelled so much, that the epigastric tumour, which before had been prominent, was sunk in the swelling; though it could still be felt on pressure, and gave the patient pain. The body became completely anasarcous. We thought that in a short time an effusion of water would take place in some cavity of the body, particularly in the abdomen, but nature decided otherwise: the patient, after a fever which lasted two or three days, had occasional shivers, and threw up a great quantity of purulent matters mixed with blood. The tumour disappeared; the urine, which formerly had been scanty, became more abundant; and the anasarcous swelling soon ceased. The patient, at distant intervals, still continued to vomit matters of the same description, and also passed them by stool; but this excretion gradually diminished, at length ceased entirely, and the patient's health was re-established."—pp. 135-7.

The author finishes this class with remarks on such dropsies as originate in obstructions of the liver, spleen, womb, mesentery, and urinary organs, which he has illustrated with cases drawn from his own practice.

Seventh Class of Dropsies.—This class includes dropsy which precedes or accompanies convulsive, comatose, or paralytic affections, or which comes after them. Such cases are by no means uncommon. M. Portal gives instances of the two first; and then, speaking of the last, he observes:—

"I have seen a patient become paralyzed in the right half of his body, in consequence of an apoplexy, which had wasted away the palsied limbs. A kind of gaseous swelling afterwards attacked the same side; it was followed by real anasarca, which was lessened, in its turn, by an effusion of water into the head, the forerunner of fatal apoplexy. Such facts had no doubt struck Willis, and other English anatomists, especially Mayow and Glisson, when they affirmed that the brain and nerves are not only productive of the sensibility and motion of the parts, but that they also nourish, by keeping up not only a free and suitable circulation of the humours, but also a proper distribution of nutritive matter in every part of the body. In fact, how is it possible not to acknowledge this last use of the encephalic and nervous system? and if we once admit it, must it not follow, that when parts are deprived of feeling and motion,

the circulation of the humours must be retarded or suspended in them, and the nature of the fluids changed; all which will occasion the stagnation of the fluids in the vessels, and in the cellular texture, and at length their effusion into the cavities? Is this not a better theory than that of Boerhaave and his followers, which, in the business of nutrition, makes the heart and vessels act the principal part, and not the brain and nerves, although it is proved by a vast number of pathological facts, that the latter have a powerful influence in the production of nutrition?

In this sort of consecutive dropsy, I have recommended with advantage tonic stimulants internally, taken from the class of sudorific and diuretic remedies; and I have sometimes had recourse to blisters of Spanish flies, which, although in other cases they might have injured the excretion of urine, were very beneficial in this, by exciting the brain and nerves, then in a state of feeling much inferior to what they should have been naturally."—pp. 163-5.

The Eighth Class of Dropsies.—This class comprehends dropsy complicated with hysteria or melancholy. Cases of this description are by no means uncommon.

"Mademoiselle de P—," says our author, "in her 15th year, and of a strong constitution, had been for two years affected with an hysteria, well marked by spasms, and involuntary contractions of the muscles of the face and extremities, and by changeable ideas, sometimes melancholy without cause, even to tears, and sometimes gay, without any adequate motive, and accompanied by bursts of laughter. She had never menstruated, and she had a dislike to every kind of food, except such as was acid, and preferring particularly esculent articles of the vegetable class to soups, or an animal diet. This young lady was seized with a flatulent swelling (meteorisme) of the abdomen, at first transitory, but afterwards constant. Several physicians were called into consultation with M. Guindant, her ordinary physician; among these were M. Barthez and I. My advice was, that as the patient was young, stout, and plethoric, she should be bled in the foot, or at least should have leeches applied to the external parts of generation, or to the thighs; and that afterwards relaxing and gently aperient drinks should be prescribed for her; such as a ptisan of dog-grass root; and leaves of pellitory of the wall, slightly sweetened with syrup of mint, and having a pugil of linden-tree flowers, and a few orange leaves infused in it. I advised also, that fifteen grains of oriental saffron should be added to it. I said I was persuaded that the retardment of the menses was one of the principal causes of the disease, which might end fatally, and that the treatment I proposed, as it was not heating, would be preferable to every other. A contrary advice prevailed: they were afraid that blood-letting by the lancet, or with leeches, would debilitate the young patient too much. It was stated that there were different nervous diseases of this kind, for which musk, myrrh, aloes, and crocus martis aperiens, might be prescribed. Nothing was

prescribed at first, but a drachm of extract of hops, with eight grains of Ethiops martis, night and morning, and immediately after it a small tea-cupful of the infusion of mugwort and mint, and moistened with the syrup of bitter orange bark. A good diet was at the same time prescribed, with agreeable and varied exercise. This treatment continued for some time, but so far from being successful, was followed by a considerable œdema of the lower extremities, and an increase of the flatulent swelling, and with pains in the abdomen. In consequence, recourse was had to the treatment which I had recommended. However, the application of leeches to the fundament was preferred to the blood-letting in the foot, which I had desired to be employed in the first instance; but a relaxing treatment was prescribed, both internally and externally, particularly the warm bath to the lower half of the body. The menstrual flux made its appearance, in considerable quantity; the flatulent swelling of the abdomen vanished; the œdema of the inferior extremities at first lessened and then disappeared; the menses again came and continued regularly; in short the young patient not only did not die of dropsy but was cured of it, got married, and continued to enjoy good health."—pp. 173-6.

The dropsy which attacks persons troubled with *melancholy*, is generally occasioned by abdominal infarctions, especially those of the liver and spleen. In such cases, as there is generally some degree of plethora, leeches should be applied to the fundament; and the juice of such plants, as succory, and borage, should be given internally, and the waters of Chatelden, Seltz, and Victoy, may be prescribed with pills of medicinal soap, extract of wild succory, and soapwort, assafœtida, and if necessary, a few grains of calomel, and even aloes, to re-establish the hemorrhoidal flux, or the menses in women. But a more active treatment may be had recourse to, without troubling ourselves about the cause of the disease, if there is anasarca, or the fear of effusion into any of the cavities. At first, the milder diuretics may be employed; but afterwards, purgative hydragogues, not too active may be of use; and gentle emetics, frequently repeated, often do much good. Our author thinks, that the sudden suppression of the menses is productive of almost innumerable complaints—especially of dropsy, combined with hysterical symptoms.

Ninth Class of Dropsies.—This class comprehends dropsy from pains of different kinds, from teething, and from worms.

"After long continued headache, and very painful ophthalmia and earache, water is often found in the head; and also in consequence of painful teething, by which so many children are cut off, after having suffered violent convulsions. How many instances of this kind I could adduce from my own practice, confirmed by the inspection of the body after death; and what fortunate results could

I not specify, obtained by the prompt detraction of blood, either by the lancet or by leeches, as well as by other remedies, and by a cooling, relaxing, and antispasmodic regimen!—Dropsy from worms, of which some authors have spoken, has been several times preceded by gaseous intumescence, for the most part in children. It is announced by the symptoms of worms, such as cholics, diarrhœa, itching at the point of the nose, dilatation of the pupil, mucous, whitish stool, &c. In that case, various anthelmintics may be prescribed with advantage, the oils in the distilled waters of mint and pellitory of the wall, with oxymel of squills and some grains of Ethiops mineral; and afterwards mild purgative hydragogues, such as castor oil mixed with syrup of buckthorn, and a small cupful of infusion of camomile or wormwood."—pp. 181-2.

Tenth Class of Dropsies.—This class includes dropsy from acrid poisons, violent emetics, or too active purgatives, and from the abuse of spirituous liquors.—General or partial dropsy in some cavity of the body, from such causes, has been often observed; and it is always dangerous, because it is complicated with severe and frequently incurable disease of the stomach and intestines. Our author has many excellent remarks on this subject; but we must restrict ourselves to a very short extract. Milk, particularly that of the ass, joined with the mildest diuretics, seems to be M. Portal's favourite remedy, where acrid poisons or medicines have been the cause of dropsy.

"I am convinced," he says, "that *bile* which has deviated from its natural state, either in quantity or quality, may be considered as one of the most common causes of dropsy: and is not this the case after emetics or pharmaceutical purgatives improperly administered, or after the ingestion of different kinds of poisons?—There can be no doubt, indeed, that when the bile flows freely, in proper quantity and quality, we have none of those eructations, flatulent swellings, crookings, or colics, which precede or accompany dropsy from vitiated bile; and from this may result different medical indications, which should guide us in the prescription of remedies.—When we have reason to fear that dropsy may be the consequence of gastritis, enteritis, hepatitis, &c., we must generally prescribe blood-letting, cooling beverages, baths, mild relaxing anodynes, in liniment or glyster, to prevent the disease; for when effusions of water take place in the abdomen, with a vitiated state of the liver or bile, they are incurable."—pp. 192-3.

M. Portal imagines, that possibly the tremors of the hand, &c. in drunkards, the confusion of ideas and the loss of memory, may be occasioned by the hardened state of the nerves, which is so often observed in the dissection of such persons. For drunkenness he does not pretend to have any cure, but cites the proverb, *qui a bu, boira*—once a drunkard always a drunkard.

However, his directions for the cure of dropsy in such persons are judicious, and deserve attention.

Eleventh Class of Dropsies.—This class comprehends dropsy from contusion and severe compression. Such dropsies are not uncommon. We shall give in the author's own words, the following case of one arising from compression, as it relates to an illustrious personage.

"The Prince of Condé, who died at Paris, a few years ago in his 76th year, soon after his return to France, experienced, after severe moral and physical sufferings, a remarkable failure in his state of health; his complexion became yellow, and his extremities were swollen by a marked œdema. His physicians prescribed for him aperient and diuretic remedies, &c., which were indicated, and also some light tonics. He wore dog-skin stockings which were laced very tight. His urine, which was rather scanty, red, and thick, had become less in quantity. I was consulted. I observed in this venerable patient a tendency towards abdominal infarctions, particularly of the liver, with some degree of fever, the pulse being confined, frequent, and unequal. I was told that it was freer in the evening and through the night, at which time he was a little heated and much troubled with sleeplessness. I began with forbidding the use of laced stockings, which making too strong a compression, appeared to me to be injurious on several accounts, which I mentioned; and I said, that old people were very apt to have swelled legs—yet often lived to a great age without any subsequent dropsy. However, I gave my consent that the legs might be bound, but not tightly with a rolled bandage; which was done only for a few days, for they soon tired of it. I prescribed the infusions of aperient and diuretic plants, with oxymel of squill, nitrous æther, the pills of Bachu, and Bontius, and afterwards a diuretic wine; but this treatment, as well as several other things, were unavailing. The disease made fresh progress, and the strength of the patient gradually failed. There was at length a loathing of food with difficulty of breathing and coma; and the Prince terminated his honourable but unfortunate career.—On opening the body, a great quantity of water was found in the abdomen, and also in the chest, cranium, and brain, but less abundant. Obstructions or infarctions were found in the viscera of the abdomen, chest, and brain, and their texture was softened."—pp. 203-5.

In elderly patients of this description, the celebrated Bouvart used to prescribe a long course of antiscorbutics, especially when they were subject to catarrhal affections.

"In old people the tendency to œdema and effusion," says M. Portal, "is singularly favoured by the excessive diminution of nervous sensibility, and of irritability in the heart, blood-vessels, and lymphatics, which is a never failing attendant on advanced age."—p. 207.

Our author's theory with regard to this diminution is something similar to one we have already given, and need not be repeated here.

Twelfth Class of Dropsies.—This class includes dropsy, which comes on, during or after tedious diseases, or from some other causes of exhaustion. When the original disease has been radically cured, dropsy of this kind seldom lasts long; at least in young people. Its prevention requires a long course of diuretics, in conjunction with bitters, chalybeates, and antiscorbutics. Blisters are sometimes necessary. But above every thing, moderate exercise, a suitable diet, some good wine, and in certain instances, a change of scene should be recommended.

"It should be known, however, that both nature and art often cure certain diseases, by starts, or as it were by *fractions*, and at several times; and on this account we often attribute, without reason, the cause of the relapse, to faults committed by the patient in his regimen or otherwise, when the disease, which was thought to be cured, really was not.—But in spite of every precaution, dropsy may take place in some cavity of the body; and what is disagreeable both to the patient and physician, sometimes without any previous warning."—p. 210.

In his kind of dropsy, the author's curative are nearly the same as his preventive measures.

Thirteenth Class of Dropsies.—This class comprehends the dropsy of women during pregnancy and after delivery.

"We have had in our dissecting rooms," says M. Portal, "the bodies of several women who had died at different periods of their pregnancy, and the cause of whose death we were ignorant of, in which water was effused into the abdomen, with infiltration in the broad and round ligaments, and betwixt the peritoneum and the body of the womb. We have also found in considerable quantity effusions of water of a reddish colour and loaded with glutinous concretions, in two ladies who died a day or two after a safe delivery; and who, during pregnancy, had never complained of any thing unusual. In the pectoral cavities, and in the cranium, the same kind of water was met with; and the organs contained in them were in some degree infiltrated. I attributed these appearances to an inflammatory disposition; and since that time in my attendance on pregnant women, I have taken care to have them bled, when there was the slightest appearance of sanguine plethora, particularly at the end of pregnancy; and I am satisfied of the propriety of this practice. Yet it is not generally adopted by physicians and accoucheurs, most of them conforming to the opinion of the public, which is unfavourable to blood-letting. It is a remedy, however, which should not be abused; but without doubt it is the most efficacious of all others in similar cases; but, like most other remedies, it is useful only when properly employed.—Some authors

have blamed me for bleeding too little, and others for bleeding too much. Now-a-days that blood-letting by means of numbers of leeches is so much in fashion, I am accused of neglecting it in cases where it might be useful; on the contrary, I am convinced that the partizans of this method do themselves abuse it, and that they are often wrong in preferring leeches to the lancet."—pp. 215-18.

If the breathing is free, with no tendency to coma, if the pulse is moderate and the skin cool, mild diuretics and laxatives, with the occasional application of blisters, will generally be sufficient; that is, supposing the pregnancy well ascertained, and no symptom present but œdema or anasarca.

"Sometimes," says our author, "even the happiest delivery becomes fatal to the child, and especially to the mother, because the unloading of the uterine and other passages, does not take place so completely nor so regularly as it ought to do. Then the milk, or a humour, which has a greater or less share of it, remains in the inside of the womb, the ovaries, the ligaments, the breasts, and in all the cellular texture of the body in general; for what part is free from it?—This noxious humour gives rise to various ills, very often to anasarca, or internal dropsies, in some organ or some cavity; or at least, dropsies are a frequent consequence of the disorder which has taken place in the excretion of the lochia. As soon, then, as we find women after their delivery show a tendency to emphysema, or slight marks of œdema at the ancles, in the face, &c., we must prescribe for them slightly aperient and sudorific potions, the ptisan of dog-grass roots, of leaves of harts-tongue and chervil, sharpened with sal de duobus, or sal vegetabile, or terra foliata tartari, in smaller doses at first, especially if there is any tension or hardness in the pulse, or we abstain from them if tension or irritation be prevalent, and give nothing but simple potions, which are relaxing and slightly diaphoretic. It will be necessary, also, if the evacuations of the lochia have not been sufficient, and if there be irritation in the abdomen, and some symptoms of plethora, to put leeches to the anus, or to the external parts of generation. We have also, several times, in a like case, made women be bled in the foot, and those who even after their delivery had some appearance of swelling in the extremities. These blood-lettings have had the happiest effects, so much so, that, in a short time after, the patients have had evacuations of blood and serous humours, by the genital passages, by the breasts and skin, which have been very beneficial to them. Sometimes, also, after the bleeding there has been a remarkable increase of urine and stools, a circumstance which proves that plethora was the only cause which opposed their excretion.—In the administration of diuretics, diaphoretics and purgatives, we must always be guided by the intensity of the disease, for what evils do those persons not occasion, who prescribe diuretics and active purgatives, before there has been a certain degree of relaxation. They soon occasion irritation of the organs, and in

consequence of this, far from evacuating the humours as had been intended, they retain them in the body, and occasion inflammation there and even gangrene. Aqueous potions alone, whey, or chicken broth, are often sufficient to produce the flow of the lochia, and the excretion of sweats, urine, and alvine evacuations."—pp. 222-4.

We regret that our limits will not permit us to extract more of the author's remarks on this subject; which are sensible and judicious, though they savour not a little of old doctrines and practices.

Corroborative of the preceding remarks, M. Portal has given a large collection of cases from the writings of the most celebrated physicians, of his own, or former times; to these, he has subjoined the general results of his practice in dropsy, which, as having in a great measure already anticipated we shall pass over entirely. The first volume is then concluded with a list of pharmaceutical remedies, and a history of several cases of dropsy, which had been cured by nature, accident, or charlatans, after the practice of M. Portal had been attended with no success. These cases are not numerous, and our author deserves great praise for having so fearlessly submitted them to the medical world.

Œdema and Anasarca.—M. Portal begins his second volume, which treats of particular dropsies, with remarks on œdema, leucophlegmatia, and anasarca. These are but different degrees of the same affection.

"In these dropsies," he observes, "notwithstanding their being external, the pulse is for the most part weak, but full and soft, with certain undulations more or less sensible to the touch; the patients have a tendency to drowsiness; their skin is pale, and somewhat yellow or tawny; and the strength is in general debilitated, both with regard to the digestive functions, and the exercises necessary to life."—vol. ii. p. 4.

Œdema, the slightest of the hydropic affections, may becured, in general, by every thing which promotes insensible perspiration, especially if it has been of short duration. It is not confined to external parts, but is often found internally, particularly in serous and mucous membranes. In opening dead bodies, the author has often found effusions of water in cavities, when there was no external œdema or anasarca; and on the contrary, he has observed the surface of the body œdematous, where the internal parts are all in their natural state.—External dropsies may be seated betwixt the cuticle and the skin, in the skin itself, and under the skin, and in the cellular texture, to a greater or less depth. They often take place after cutaneous eruptions in exanthematous fevers, such as measles, small-pox, erysipelas,

&c. The skin appears as if it were disorganized and blanched, and the water, which is in great abundance in the corpus mucosum, elevates the cuticle, and saturates the skin itself.—The corpus mucosum is in a more fluid state than it is naturally, and it is discoloured or of a yellowish hue, and the skin is of a soft or whitish texture; its pores, when they are examined closely, appearing opener than usual, and allowing drops of water to pass through them, even when they are stretched or pressed in the slightest manner. The cellular texture, immediately beneath the skin, contains water which is limpid, yellowish, or of a dark colour, having sometimes the consistence of melted fat or gelatine, or of mucus, and sometimes forming masses of a scrofulous nature, which penetrate into the interstices of the muscles, or their fasciculi, now more or less impregnated with serum. The cellular texture, which is the seat of dropsy, is variously thickened; its threads and plates being more or less dense, its cells are also more or less enlarged, and sometimes so much so, that they form but one out of many, or at least are of smaller number, and of various forms, according to their situation with respect to the surrounding parts. Sometimes the skin, the external mucous texture, and the fat, have acquired a greater thickness and density than is natural to them, and in a remarkable manner, with a greater or less collection of water.

"I have observed that the partitions formed of cellular texture, which are naturally thin, both those which separate the muscles and those which divide the limbs and trunk longitudinally into two halves, had, in some cases, become almost as firm as cartilage. I remarked this particularly, in a scrofulous woman, the one half of whose body on the right side was completely anasarcous, whilst the other was in its natural state. Such are the results of my own dissection; but the reader will find more in Morgagni on the same subject."—pp. 11-13.

In idiopathic anasarca, topical applications are often useful, but never in that which depends upon some internal dropsy.

Hydrocephalus.—The next particular dropsy, taken notice of by our author, is hydrocephalus, on which he has entered at some length; but we must confine ourselves to a few extracts, as the subject has been nearly exhausted by some of our own countrymen. After enumerating the symptoms as they occur, in the three gradations of hydrocephalus, he observes:—

"It is evident that these symptoms have a much longer duration and are much less intense in the *chronic*, than the acute form of the disease, though in both they are of the same nature. And it is doubtless, on this account, that the greater number of physicians, our predecessors, have spoken only of *chronic* hydrocephalus, confounding the *acute* with *true cephalitis*, at the termination of which,

they had remarked that water is found in the cranium or brain, as it is found in the cavities of the chest after pneumonia, in the pericardium after carditis, and in the abdomen after the inflammation of different organs contained in that cavity. Such certainly is the reason why the ancient physicians, at least for the most part, have not distinguished chronic from acute dropsy. We believe, however, that for the advancement of the healing art, it is not only far from useless, nay, it is of the utmost consequence, carefully to consider this inflammatory state, and to attack it with blood-lettings, and all kinds of antiphlogistics, in order to prevent the effusion of water in the head—water which is commonly not limpid but puriform. It will be observed also, that in this acute hydrocephalus, the substance of the brain is in general redder, and that its blood-vessels are fuller of blood. But I must observe, that decided inflammation of the brain may not always end in hydrocephalus. In the present day, however, some physicians are so persuaded that acute hydrocephalus is very frequent, that they admit a particular kind of it, without effusion of water either in the brain or cranium, thus confounding acute hydrocephalus with cephalitis."—pp. 32-4.

Pathology.—M. Portal's remarks on the causes of this disease contain nothing new. But his examination of the brain, &c., after death, has evidently been made with great care, and it grieves us to be able to give only a short specimen of it.

"The water," he observes, "contained in the ventricle is sometimes exceedingly transparent, but it is sometimes, also, as if it were mixed with blood, as it contains filiform concretions of different kinds. Often, although quite limpid, it makes as strong an impression on the tongue as salt water or any other stimulant liquid would do. But if the water is in great quantity, as is generally the case in real hydrocephalus, it is quite insipid. The choroid plexus is often formed by varicose vessels, and sometimes it contains numerous hydatids of greater or less size. Hydatids are also sometimes contained in the ventricles, and unconnected with any other parts, and they are even found in the very substance of the brain, of various sizes. Sometimes there are tubercles containing substances differing in consistency and colour. The cortical substance of the brain is whiter than it is in its natural state, and often it cannot be distinguished from the medullary part. In some cases the brain is so very small, is so much shrunk, and is covered with such an immense quantity of water, that it seems almost to have no existence. It is often so fluid, that its organization appears to be destroyed, or to have been dissolved by the water itself; and this takes place not only in new born children, but in those who are much older."—pp. 44-5.

The farther the organs concerned in hydrocephalus are removed from the natural state, the greater the quantity of water, and the longer the time it has continued, the more dangerous is the disease, and of course, the more difficult of cure. Even

where the constitution is in some degree tainted, a cure may be obtained by the use of appropriate remedies, provided the brain is not disorganized nor the disease old nor intense.

"I have seen children," says M. Portal, "born with symptoms of scrofula, and even lues venerea, and having from their origin a large ill-shaped head, and a strong tendency to hydrocephalus, who have been preserved from it by a mixture of antiscorbutic and mercurial remedies, given for a long time, in small doses. I have also seen others whose nerves were treated in this manner, and with so much advantage, that the infants who were threatened with rickets, and had considerable deformity of the head, and some symptoms of hydrocephalus, have been completely cured, the head and the rest of the body having assumed their regular proportions."—pp. 49-50.

Treatment.—With regard to treatment, we must carefully distinguish that which is proper for the acute, from that which should be prescribed for chronic hydrocephalus. In the first case the treatment should be active, in order to cure the cephalitis and prevent the hydrocephalus. We must, therefore, have recourse, almost in every instance, to copious and repeated blood-lettings with the lancet, either from the foot or arm. Afterwards, we may, if necessary, apply leeches to the temples, or neck, or elsewhere, whilst, at the same time, or a little after, we may recommend the employment of emollient, demulcent, relaxing, and anodyne remedies, and the use of sinapisms, or blisters, to the inferior extremities. We might afterwards prescribe various abstergent medicines, according to the nature of the cause to which the disease may be attributed. Sinapisms or blisters to the legs or neck, or even a seton, would be absolutely necessary, if, instead of very severe headache, agitation, sleepiness, and *violent fever*, there were coma, with sluggishness, slowness, and weakness of the pulse. As to the treatment of hydrocephalus, which is the consequence of cephalitis, though often all the symptoms of cerebral inflammation are quite gone, it must be opposed at first by mild aperients, principally diuretics, and afterwards by purgative hydragogues, blisters, sinapisms, &c. We may afterwards have recourse to such alterations as are suitable to the presumed cause of the disease, and with much greater prospect of success, if our knowledge of that cause has been correct. We have experienced the good effects of mercurials in small quantity, especially calomel, given in the dose of from two to four grains, twice or thrice a day for a long time, or of mercurial syrups combined with bitters or antiscorbutics, and with the addition, to each dose, of five or six drops of tincture of squills; but if there be inequality in the pulse, or in the action of the heart, it will be better to employ the tincture of digitalis purpurea, in nearly the same quantity, in one or two spoonfuls of orange-flower water, or in

some proper julep. If it be thought necessary, some cupping glasses may be applied upon the spine itself, with or without the application of leeches or scarifications to the tumefied part, accorcing to the urgency of symptoms: setons may also be used and kept open for a longer or shorter time; and even moxa may be applied repeatedly to the head, neck, or spine, and sometimes with great benefit: either by the pain it excites, or the suppuration it occasions, and which may be kept up for a longer or shorter period. If the patient is rather in a state of inertness, relaxation, or atony, than in that of irritation, which might indicate more or less inflammation, or to use the modern phrase *acuity*, those remedies might be prescribed, which may stimulate or re-animate the tone of the cerebral organs, or diminish their infarction, and recall the action of the lymphatic or absorbent systems, at the same time that we prescribe medicines which may increase the secretion and excretion of urine. For this purpose physicians recommend, and with advantage, the decoctions, extracts, tinctures, of rattlesnake, milk-wort, Virginian snake-root, sarsaparilla, Chinese smilax, and gentian; the mildest mercurials, in various forms, externally or internally; juleps, with the waters of parsley, chervil, and aperient roots; oxymel of squills in an infusion of arnica flowers, &c. Pills of extract of hemlock or ox-gall, have also been usefully employed as a vehicle for a few grains of calomel, resin of guiacum, wood-louse powder, &c. *Douches*, with the waters of Baréges, or Balaruc, have been recommended for the spine, especially in *chronic* hydrocephalus; but I never recommended fumigations, as I am persuaded they have been injurious in some instances. When the bones of the cranium separate, or when there is any protuberance of the brain or cerebellum, I need not say that it would be barbarous to make the slightest compression on the head in any manner; and penetrating the cranium with a trocar, as some physicians have advised, can only have fatal consequences. One cannot believe that Le Cat, and other able men, ever could have recommended it.

We have been so lately treating of diseases of the spinal marrow, that we need to say nothing of its dropsy in this place. M. Ollivier seemed to speak with some doubt of the vessels of the arachnoid ever having been seen; but our author says, "the arachnoid, as in hydrocephalus, is also more or less red, its blood-vessels being sometimes very apparent, from the blood which they contain." Neither do we think it necessary to extract any thing from the remarks on hydrophthalmia, or dropsy of the eye.

Hydrothorax.—Hydrothorax, or dropsy of the chest, is next in order, and our author has entered into its consideration at great

length. He first enumerates the various places of the chest which are the seat of water, in so far as anatomy has detected them: and he observes that hardly ever any one of them occurs alone. It is a disease not easy of detection; yet authors have not failed to give the symptoms peculiar to each kind of it. M. Portal pretends not to such exactness; but

"The following symptoms," he observes, "especially when they are found in company, are the least equivocal: difficulty of breathing; bloatedness of the face with redness in the region of the cheek-bones; turgescence of the lips, the colour of which is more or less dark or livid; swelling or œdema of the feet and hands, and at length successively of all the exterior of the body; the diminution of urine, the sensation of a weight in the epigastric region, and a greater or less swelling of the hypochondria, especially of the right hypochondrium. The pulse is unequal, rebounding, and often intermittent at a longer or shorter period. There is also, frequently, thirst, with cough and spitting of blood or phlegm, or purulent like matter, and with palpitations of the heart, and sometimes a difficulty of breathing nearly amounting to suffocation. Some patients have felt a numbness of the limbs, and even palsy, though rarely, of one or both arms of the inferior extremities, and in short syncope, which at length proved mortal. The dyspnœa is increased by going up a stair or lying horizontally in bed; so that the patient must have his chest and head kept in an erect posture by means of pillows, or he is obliged to remain seated in an easy chair, with his head and chest inclined towards the abdomen." —pp. 92-3.

It cannot be expected that we should follow the author through all the minutiæ of his descriptions; we shall, therefore, merely make a few gleanings. In hydrothorax, the swelling of the wrists, and afterwards that of the arms, precede, in general, the swelling of the lower extremities. Here syncope is not so common as in dropsy of the pericardium, and on that account, patients are oftenest cut off by suffocation. Seeing that the symptoms supposed to form the diagnosis of hydrothorax are so illusory, percussion of the chest has been recommended by Avenbrugger and Corvisart, in order to distinguish by the sound emitted, the true state of its cavity. *Auscultation* by the *stethoscope* has also, as it is well known, been had recourse to; but in M. Portal's opinion, even in the hands of those best acquainted with its use, the stethoscope is only subsidiary to other modes of knowledge in the business of diagnosis. It is with reluctance that we pass over our author's very luminous exposition of the appearances on dissection, and his summary of the causes of hydrothorax, and give merely a few extracts from his plan of treatment.

"As soon," says M. Portal, "as dropsy of the chest is really present, we should think of nothing else, whatever be its cause, but to evacuate the water which forms it. There can be no doubt, that if there be imminent risk of suffocation, we should have recourse immediately, *if it is practicable*, to the paracentesis of the chest. Internal remedies, even if their efficacy were considerable, would be too slow in their operation, to be depended on in such an emergency; indeed we cannot expect much good from them at any time, unless the internal parts of the chest be in their natural state, or so little altered that they can be easily restored to it, a circumstance which is seldom to be expected. But even the paracentesis will afford but a temporary relief, if the internal parts are evidently diseased; but if the dropsy has come on suddenly, in an otherwise healthy person, it may produce a complete cure, if diuretics and other internal remedies be employed to cause absorption, and the evacuation of water from the chest. After diuretics, the most approved internal medicines are sudorifics and sometimes purgatives; but much cannot be said in favour of any of them. Externally, blisters may be applied to the chest, or moxa, or a seton. But in this disease, more than in any other, every thing must be done quickly, *periculum in mora*. Fomentations and embrocations of different kinds of plants, sharpened with ammoniacal tincture have also been recommended, and unctions, with mercurial and other discutient, solvent, and aperient ointments; but, in confirmed hydrothorax, these remedies have little or no efficacy. Upon the whole, dropsy of the chest is one of the diseases most difficult of detection in its commencement, when, perhaps, it might be possible to check its progress; and it is only when it is about to end in death, that we can be *almost* certain of its existence; whence it happens that a surgical operation is often not thought of till the patient is in the agonies of death. It should, therefore, be performed as early as possible; otherwise it can do no good."—pp. 118-19.

Dropsy of the Pericardium.—Our author acknowledges that diagnosis of this disease is also extremely difficult, as many of its symptoms are similar to those which occur in diseases of the heart, in hydrothorax, and in dilatations of the aorta. In this disease, diuretics have often been of service; and M. Portal thinks, when the patient is stout, and the pulse full, intermittent, and irregular, with palpitations of the heart, intumescence of the liver, and other symptoms indicating an oppressed circulation of the blood in the brain and lungs, that blood-letting may be employed. In two remarkable cases, he saw good effects from it.

Instead of enlarging on this subject, we shall give, in our author's own words, the history of a case which terminated favourably.

"A milliner, twenty-eight or thirty years old, for a long time subject to infarctions in the glands of the neck and left arm-pit, and

also to herpetic eruptions on different parts of the body, had been likewise very subject to obstinate ophthalmia, with œdematous swelling of the eyelids and face. M. Rouland, the surgeon in attendance, treated her with ptisans of the stalks of woody night shade, and the summits of forest scabious, sweetened with syrup of fumitory. She had also taken, for a long time, the pills of Belloste, and blisters had been used at different times, and for the last ophthalmia, which had been very obstinate, a seton had been inserted into the back of her neck, and with benefit. During the preceding spring the herpetic eruptions, which were much more distinct than formerly, continued; but six months afterwards, in the summer of 1815, the patient was seized with cough and difficulty of breathing; and she complained of great thirst, which was no ways lessened by the demulcent drinks prescribed for her. The action of the heart was much stronger than natural, and irregular. There was also a remarkable pulsation in the carotid arteries, particularly the left; the pulse had intermitted ever since the menses had become scanty, and there was a remarkable tumour in the left hypochondrium, which seemed to be occasioned by the spleen pushed down into the abdomen by the left wing of the diaphragm. The left hand, the wrist, and the fist, were, in some degree, œdematous; but, for a short time past, the left arm had been enormously swelled by water infiltrated into its cellular texture. So rapid a progress of the disease, joined by increased dyspnœa, was very alarming, and the more so, that the corresponding side of the chest soon became œdematous. The heart was affected by a kind of tremor, and the difficulty of breathing was extreme. The patient meanwhile, could lie only on her back, a little more inclined to the left than the right side. The urine was scanty and dark-coloured; the face dark, particularly the region of the cheek bones; the pulse was slower than it is naturally, and large and unequal, but not hard. Such was the state of the patient when M. Rouland called me to see her. I found her in danger of immediate suffocation, unless something were done instantly to relieve her. From the symptoms, I suspected that dropsy of the pericardium was the predominant disease. I advised the application of a large blister to the region of the chest, corresponding to the heart, and at the same time, fifteen leeches to be put to the external parts of generation, and to the thighs. I prescribed a mixture to be given in spoonfuls. It consisted of two drachms of gum ammoniac, one ounce of oxymel of squills, and four ounces of distilled water of hyssop; and to each dose, four or five drops of the tincture of digitalis were added. The blister very soon produced a considerable discharge of serum, and the leeches furnished a copious discharge of blood; and, favoured by these remedies, the mixture procured a progressively increasing expectoration. The breathing was now easier; the urine became more abundant and clearer; and there was also a discharge from the bowels, which was kept up by glysters, prepared with a decoction of dog-grass roots and wall-pellitory leaves, and three drachms of

mineral crystal, and two ounces of mercurial honey. In this way, not only was the progress of the disease stopt, but the patient placed in a much better state. In order to prolong the discharge of serum, externally, and to facilitate the evacuation of water from the pericardium, I recommended the establishment of a seton upon the chest opposite to the left lateral part of this cavity a little in front, towards the place where the pericardium forms a somewhat rounded angle to lodge the apex of the heart. I prescribed at the same time pills of calomel, squills, and digitalis, with a diuretic potion, to be continued for a longer or shorter time; and this treatment had the happiest effects. The urine continued to flow abundantly, the bowels were open, the breathing became easy; the pulse regular, and the patient was cured of a dropsy of the chest, to all appearance seated in the pericardium."—pp. 145-8.

The author has given another case where his practice was equally successful.

Ascites.—The name of Ascites is generally given to that dropsy in which the water is contained in the cavity of the peritoneum; but, in abdominal dropsies, the water is not always effused there; hence, instead of one *true ascites*, there are several *false* kinds of it; and those on account of the prognosis and treatment it is necessary carefully to distinguish. We need not, however, follow our author on a subject so well known.

"Besides those causes which are common to all dropsies, and of which we have already spoken," says M. Portal, "there are others peculiar to dropsies of the abdomen; most of them affect that cavity generally, or some one or other of its viscera, such as jaundice, colics, diarrhœas, dysenteries, sanguineous plethora of the abdominal vessels, the frequent inflammations of the abdomen in general, or those particularly of the peritoneum, stomach, intestines, liver, spleen, mesentery, kidneys, bladder, womb, &c. These inflammations are sometimes indicated by pain, acute fever, and other intense symptoms; but much oftener they are so obscure, that the patients suffer too little to complain of them, and hence the physician is ignorant of their existence; but even then, the inflammation is no less real, although *latent*, a thing which unfortunately often happens, especially before ascites.—Amongst the local and frequent causes of ascites, we must include different obstructions of the abdominal viscera; as of the liver, spleen, and mesentery; most commonly from scrofula, herpes, itch, lues, scurvy.—It may be occasioned also by falls, or blows which may have struck upon the abdomen, or by strong compression of that cavity; or by the abuse of wine or spirituous liquors, or by unwholesome food, or by living in a damp situation, &c.—pp. 168-9.

The prognosis is generally unfavourable; but if the disease has come on suddenly in an otherwise healthy person, if the

paracentesis be resorted to immediately, and followed up by suitable diuretics, if the waters discharged by the operation be clear or yellowish, if a flow of urine come on, and the patient gain strength, there is some prospect of a permanent cure. In no complaint is discernment in the choice of remedies more necessary than in this; and in none do we find the effects of remedies so variable. In by far the greater number of cases, our author has found the paracentesis but a palliative remedy; but nevertheless he recommends its use.

On the subject of hydatids he is very copious, and gives that division of them which we have already given in our analysis of M. Poilroux; but as the whole is little better than a compilation, if we except a few cases, it is needless to extract any of it. It is valuable, however, as the compilation of such a man.

Uterine Dropsy.—Here the author has made many valuable remarks, most of them the result of his own practice; but we can only spare room for his observations on the mode of cure.

"The treatment of this disease," he says, "is difficult, because frequently its existence is unknown, not only when it commences, but even, when it has reached its last stage, at which time it may be complicated with diseases of the neighbouring organs, and very easily be confounded with them. And we cannot at first know, whether the water is contained in the womb itself, or in cysts and hydatids, &c.—In our treatment of the disease, all these circumstances should be taken into consideration. As in this kind of dropsy the menses are very often suppressed, it is a matter of much consequence to know whether or not the woman is in a state of pregnancy, as the two states are not incompatible with each other.—We enquire carefully into the causes of the disease, and combat them by appropriate remedies; we next take into consideration, the state of the menstrual discharge: it may sometimes be very abundant, and during the intervals there may be an efflux of a serous fluid. We must always ascertain by the pulse, and other circumstances, whether or not plethora is present, and if so, we should make use of blood-letting in preference to every other remedy, if the woman is not pregnant. It is only when the symptoms of plethora are obscure, that we should restrict ourselves to the application of a few leeches to the anus or groins. After blood-letting, the menses very often re-appear, if they have been previously suppressed, or become regular, if they were otherwise. After blood-letting, we prescribe demulcent and gently aperient drinks; and thus, by the evacuation of the water, we have cured dropsy of the womb. In addition to the above, we may give mild tonics, if the constitution of the patient can bear them. I have seen astonishingly good effects from a diuretic wine, which is prepared with a handful of wormwood, half as much chervil, half a drachm of nitre,

and a pint of Chably white wine: the dose is three liqueur glassfuls in the day.

The treatment must be very different when the patient is in a weak state of health; for instead of blood-letting we must prescribe tonics, particularly chalybeates or diuretics, and tonic unctions with diuretic tinctures. Mercurials are also sometimes useful, particularly if there are hydatids; and if any obstruction exist in the womb or in the vagina, our treatment must be directed to these parts. When the water has been evacuated, we may, in order to put a stop to its recurrence, if the parts are sound, and not in an inflamed state, inject into the cavity of the womb a stimulant liquid, which may induce both its contraction, and that of the orifices of the serous excretories; and for this purpose M. Percy has used with complete success an injection, consisting of three parts of water saturated with salt, and one of vinegar. We may also use injections, with wormwood, mint, and such plants, or with bark and mercurial preparations."—pp. 255-8.

From M. Portal's observations on hydromphalus, hydrocele, and dropsy of the joints, we might have made an extract or two, but our limits compel us to stop short. We must observe, however, that after the history of each particular dropsy, there is a collection of cases from the most respectable sources, which are calculated to throw light on the preceding history.

In the review which we have now given of M. Portal's work, we have studied, as far as possible, to make the author tell his own story; being fully aware that so eminent a writer needed not the adventitious aid of a journalist to set him off. The work is extremely valuable, and though, in perusing it, we have met with repetitions, and not a few truisms, naturally enough occurring in the work of such a veteran author, yet are they lost in the multitude of original remarks which are scattered through the volumes.

M. Portal appears to be a believer in the humoral pathology, and several of his doctrines are obscure, but as his practice is founded on a patient observation of nature, it is not likely to mislead. He constantly inculcates, that medicine is valuable only when it is properly administered; and to obtain this is the most difficult of all points in practice. His remedies, in general, are mild and chiefly vegetable, and to be useful, they must be continued for a long time; and he informs us, when changed by other physicians for those of a harsher nature, that death has often been the consequence. This is saying a great deal; but it must be allowed, that in the present day, vegetable remedies, particularly in their fresh state, are too much neglected; and we believe that the fresh juices of plants, and mineral waters drank at the

fountain's head, have virtues which neither of them possess in their dried or chrystalized state.

In our author's company we are introduced into much genteel society, princes, dukes, marquises, counts, and barons; and his cases are interesting, not only in themselves, but as being connected with some of the most eminent physicians of France. He writes, generally, in a style of great amenity; but he complains that his discoveries have been attributed to other men—many of them his own pupils. Indeed, he refers often to his own works, with all the partiality of an aged parent; and his *ego ipse* not unfrequently stares us in the face. He has spoken, however, in terms of high commendation of many of the older English authors, and of no one more highly than Mead, whom he always styles the learned Mead; and yet this is the man, the friend of Boerhaave, and the intimate associate of Freind, whom Dr. Thomson, the chemist, has spoken of, as having enjoyed an ephemeral, and consequently an undeserved reputation. Portal seems to know little about the present state of medicine in Britain, at least he has not deigned to panegyrize our Armstrongs and other great men, who, no doubt, would have felt gratified by his praise.

QUARTERLY HISTORY

OF

IMPROVEMENTS AND DISCOVERIES,

BOTH AT HOME AND ABROAD.

IN

Anatomy,	Surgery,	Materia Medica,
Physiology,	Practice of Physic,	Pharmacy,
Pathology,	Midwifery,	Chemistry,
Morbid Dissections,	Forensic Medicine,	Botany, &c.

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I. ANATOMY.

Since the publication of our last, we have received the fourth number of Lizars's Anatomical Plates, containing the muscles of the trunk. We scarcely think that this is so well executed as the previous ones. There is a hardness and stiffness in the designs which are not natural, but remind us more of drawings from wax models than from the real subject—the chief objection to the plates of Albinus, Cheselden, &c. The work is very meritorious, notwithstanding; and, so far as we have examined it, correct in positions and proportions. The anatomy of Hernia, it is understood, has been communicated for a future Number by Sir A. Cooper.

Alcock's *Section of the Leg* *.—The author's design, which is excellent and useful, is to exhibit the actual and relative situation of all the arteries, veins, nerves, and other parts divided in amputation, at the various points usually selected for the performance of the operation. The parts are represented of their natural dimensions, and explained by an outline and copious notes of reference. This first plate represents a section of the leg, at the usual place of performing amputation below the knee, namely, about one-third the length of the tibia, from its upper end. The remainder of the series will comprise the operations on the

* Section of the Leg, forming part of a series of Engravings, designed as Practical Illustrations of the Surgical Anatomy of the blood-vessels, nerves, &c., relating to amputation. By T. Alcock, 7s. 6d. plain, 10s. 6d. coloured.

thigh, the arm, the fore-arm, as well as the amputation of the leg, by the flap operation, and those at the shoulder and hip-joint. We are sorry to say that the execution of the present specimen is rather inaccurate, and falls far short of the author's own standard of medical ability, as laid down in the Apothecaries Transactions.

Mr. M'Kenzie *on affording Anatomical Subjects* *.—This is an eloquent appeal to the public and the legislature, on the interesting topic of affording subjects for dissection, to the anatomical schools. The difficulty of obtaining subjects, is annually increasing, and it is very much fostered by the public press adding force to popular prejudice, by exaggerated reports of resurrection transactions.

"An increasing desire on the part of medical students to be acquainted with anatomy, has of late years naturally increased the number of teachers, and the demand for dead bodies. Unfortunately some of these teachers have been careless with regard to the modes which they adopted for procuring subjects. Exposures have consequently taken place, and by these the public attention has been roused. The newspapers have lent themselves, with a few honourable exceptions, to be vehicles of the most foul and perfidious defamations of anatomists. Even judges on the bench have descended to use a vindictive and vituperative language, ill becoming their place, and their supposed knowledge of human affairs. All these causes have conspired to create a jealousy of anatomy, which it never merited; and ultimately to produce associations for guarding the places of interment, and even avowedly for putting the study of anatomy down.

"Dead bodies must be procured, or anatomy must cease, and medicine be deprived of its only true foundation; and the only question is, how are dead bodies to be obtained, so as to give the least possible offence to the public feelings, and to the rights of individuals? The anatomists have indeed been exposed to the calumnies of those miserable hirelings, who for a paltry shilling, to be won by pleasing the palates of the mob, would sell the last lingering spark of truth. But while he is a stranger to those superstitious fears which haunt the common mind, the anatomist approaches the dead body of his fellow-man with the feeling, that he himself must one day be stretched out in the same attitude of insensibility.

"The cultivators of anatomy are furnished over the whole Continent, with safe asylums at the public expense, where they may pursue their investigations on the dead bodies furnished to them by legal and exact regulations. In Britain alone, anatomy must be carried on by stealth, and its cultivators render themselves amenable to the laws of their country, by robbing the sepulchres of the dead."

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* An Appeal to the Public, &c. By W. M'Kenzie, Glasgow.

Harrison's *Surgical Anatomy* *.—From Mr. Harrison's character as an anatomist, the student may rely on the accuracy of this useful and practical Manual. We hail this indeed as an excellent companion to Mr. Averill's little work, and we think it manifests much judgment in these authors, to put what is useful in a narrow compass and a cheap form, rather than get up expensive books, which can never come into general circulation among students and junior practitioners. Mr. Harrison promises a second volume, of which, and of this, we intend to give an analysis.

Mr. Anderson *on the Ileo-vesical Fascia.*—In recommending the lateral operation of lithotomy, Mr. Anderson, of New York, thinks it of importance to avoid cutting what he denominates the ileo-vesical fascia. Of this he gives the following minute description, by which it will appear, that it forms a portion of the great fascia described by Godman, under the name of the fascia superficialis. (See *Anderson's Journal*, p. 110.)

"Having observed what was to be seen immediately under the peritoneum, we are now led to give attention to a tolerably dense though semi-transparent membrane, covering the iliacus and psoas muscles, and named fascia iliaca. This will be perceived at the inner side of the crista of the ilium, continuous with the fascia transversalis, and to have boundaries as defined in a former part of the work, while upon the anatomy of hernia. I shall now enlarge upon that description, and describe it as I have traced it in connexion with the urinary bladder.

"We accordingly find the iliac fascia, after lying under the iliac vessels, passing into the cavity of the pelvis; by going over the brim from the symphysis pubis to the ileo-sacral articulation, on each side. For some way down it has close adhesion to the side of the pelvis; and this is as far as the lower part of the symphysis pubis on its forepart, the hole for the transmission of the obturator vessels and nerve in the middle, and as low as the spinous process of the ischium behind. At a line running from these parts it is reflected inwards, to have attachment to the side of the bladder—so that it leaves the side of the pelvis by a semi-elliptic course, convex towards the abdomen. We also find it connected to the side of the urinary bladder by a line of attachment of a similar curvature. This line commences above the situation of the prostate gland, after having proceeded from the upper surface of the membranous urethra; from these parts it rises upwards in conformity to the nature of the curve, which is here also convex towards the abdomen: taking this direction, it reaches the opening in the side of the bladder which receives the ureter, and afterwards has a course

* The Surgical Anatomy of the Arteries of the Human Body, &c. By R. Harrison, A.B.T.C.D.—Vol. I. Dublin, price 5s.

downwards and backwards, to end at the extremity of the vesiculæ seminales.

"There is therefore a loose portion of iliac fascia situated between the side of the bladder and pelvis. This I have called ILEO-VESICAL. It is in breadth anteriorly about half an inch; becoming gradually wider, is opposite the hole for transmitting the obturator vessels an inch and a half; and then getting narrower, is in the neighbourhood of the spinous process of the ischium, less than an inch wide. In looking at the upper surface of this ileo-vesical reflection, we observe that it dips behind the pubis, so that on each side of the symphysis there is a pit or pouch, which is of size to receive the end of the finger. This portion of fascia appears at first view to be of tendinous structure, being more dense and of a different texture from the fascia iliaca covering the muscles in the hollow of the ilium; which is owing to a circumstance that does not dispute its continuity with the fascia iliaca, and is to be attributed to the tendinous connexion of a part of the levator ani, that will be more distinctly explained when we come to another part of the dissection.

"From this aspect we can see, between the line of attachment of the peritoneum to the urinary bladder and that made by the fascia, the muscular coat of this viscus covered by a thin membrane, which is a lamina, (THE SUPERIOR LAMINA OF THE ILEO-VESICAL FASCIA,) sent up by the ileo-vesical fascia; and it is by it that this part of the bladder is supported and made equally strong with that defended by the peritoneum. This lamina, by sending a process anteriorly from the bladder to the posterior part of the symphysis pubis, forms an interior ligament to the bladder, which becomes a partition by dipping between the anterior connexions of the ileo-vesical fascia; and fixing itself to the upper part of the membranous urethra, aids in forming the two pits or pouches referred to in the last paragraph.

"From this view of the parts, there can be also observed a deep pit behind the bladder, bounded by this fascia, and occasioned by the particular dipping of its posterior part. Into this, urine might find access in the high operation for stone; whence I know not how it could be extricated. Into this I also believe extravasated urine finds a place from the lateral operation by the gorget, in consequence of the manner in which this instrument is sometimes introduced, as shall be noticed when we come to another part of the subject.

"It can, moreover, be observed at this stage of the dissection, how the peritoneum, as it passes to the rectum, has its angle of reflection just where the ileo-vesical fascia ceases to have attachment to the posterior part of the side of the bladder; so that it becomes the upper and posterior boundary of this bag into which the urine is likely to fall, from the unguarded use of the gorget in lithotomy. It will now be perceived that urine thus situated, in however small a quantity, will be in contact with the outer or under surface of this highly sensible membrane. If this is substantiated, I

think we have a ready solution to those cases of death, after the operation of lithotomy found upon record, and involved in mystery, not having attached to them any rational explanation for the fatal event."

Mr. PLUMBE *on the Non-existence of the Rete Mucosum* *.—We should have wished to see something more definite from Mr. Plumbe, than the following extract—something of dissection by himself, and not mere opinion and reliance on the authority of one anatomist, in preference to that of another. Conjecture and speculation will never make an anatomist, as Mr. Plumbe must be well aware; and if he has done more, we can only say that he has not put it in a tangible form on the record.

"The most distinguished authors," he says, "on dermoid pathology have boldly fixed the seat of some of the most important and obstinate diseases in parts of the skin denied by equally distinguished anatomists, to have any existence in reality. According to Alibert, the seat of tinea is in the rete mucosum; a substance which Mr. Lawrence, and others, never could find in the white subject, and which Dr. Gordon denies the existence of, except in blacks. In my Essay on Porrigo, I had occasion to express a similar opinion with the last distinguished anatomist on this subject, without, however, having at that time read his uncompleted system of anatomy to which I refer. This supposed membrane may perhaps be nothing more than a portion of the inner surface of the cuticle, even where it is found. We shall probably have this matter cleared up in the forthcoming work of Mr. Chevalier.—The skin has been usually described since the time of Malpighi, as consisting of three parts, or layers, of differently formed substance; the cuticle, cutis, and an intermediate thin web-like membrane, which this anatomist thought he had discovered; the corpus, or rete mucosum, and which has been described, though not satisfactorily demonstrated, by succeeding anatomists up to the present period."

Our readers may wish to see what Mr. Chevalier has said on the subject, in the work, we presume, referred to by Mr. Plumbe, and already analysed in this Journal, p. 77.

Mr. CHEVALIER'S *Description of the Rete Mucosum.*—"Underneath the cuticle, there is situated another membranous substance, which has been called the rete mucosum; improperly so called, however, for it is neither a net-work like membrane, nor is it a mucous substance; except so far as it is sooner soluble by maceration, and, when putrescent, exhibits the appearance of a slimy matter; not coherent like mucus, but more diffusible, and more easily washed away, than either the cuticle or the cutis. It has been by some considered as a lamina of the cuticle itself, but it is no such thing; being altogether different in its ostensible properties, and intended and adapted for very different uses. It should rather be

* From Plumbe on Diseases of the Skin, just published.

called the second, or interior epidermis, for reasons I shall presently explain. It varies much in its colour in the natives of different countries, from the fair Circassian to the dusky Negro.—It is in general readily separable, with due care, from the cuticle. It is more equable in its thickness, and softer in its composition, &c."

This, we think, will induce Mr. Plumbe to be more cautious the next time he ventures opinions upon anatomical subjects, which he has evidently not investigated by actual dissection and observation, but been led astray by the authority of Gordon and Lawrence. It is unfortunate, also, that Mr. Plumbe's conjectural anatomy should form part of the first page of his work on the skin, as this must tend to weaken his authority in other points which he has really studied to some purpose. These, however, we must leave till we analyze the volume itself, when we shall find ample occasion to recommend the work.

M. Trasmondi *on two New Nerves of the Eye**.—This may be called the pickings of the discovery made by Dr. Horner of the tensor tarsi muscle of the eye, described in our last Number, page 283. In dissecting the tensor tarsi, M. Trasmondi discovered two small nerves running to it from the external nasal twig, the last subdivision of the ophthalmic nerve of the fifth pair. The same nerve—the ophthalmic branch of the fifth pair sends a twig to the lachrymal gland, another to the cavity of the nose, and the other two to the tensor tarsi muscle; and hence, says M. Trasmondi, that perfect concordance, the admirable consensus which prevails in the action of all these parts, in secretion, absorption, the flow of the tears into the nostrils, &c. M. Trasmondi has likewise shown the bearing of the discovery on fistula lachrymalis, and other diseases connected with the lachrymal passages, and illustrated the whole with engraved designs.

Dr. Gartner *on a Duct in the Cow* †.—The researches of Dr. Gartner, of Copenhagen, seem to tend to revive the doctrine of female semen, which has been long looked upon as equally fabulous with the humoral pathology; and yet this also is again coming into fashion. Dr. Gartner on examining the lymphatics of the uterus of a cow, came by accident upon a canal full of clear yellowish fluid, which was neither a lymphatic nor a blood-vessel. By further researches, he established the existence of a duct on each side of the vagina, beginning by a small orifice near the mouth of the urethra, but soon expanding into a sac

* Intorno la Scoperta di due Nervi dell 'Occhio Umano. G. Trasmondi, Roma 1822.

† Anatomisk Beskrivelse over Et ved Nogle Dyr—Arters uterus Undersögt Glandulöst Organ, &c. H. Gartner, M.D.

large enough to admit the finger. This part has its inner surface smooth and polished, and its outer fibrous, and somewhat muscular, while the rest of the duct is composed interiorly of mucous membrane, and exteriorly of common cellular substance. It runs from thence along the side of the vagina next the bladder, and terminates in a *cul-de-sac*, about an inch from the os uteri. This communicates with the canal that begins here, by a valvular or cribriform opening. Besides this duct, there are a number of follicles or cysts, on which many blood-vessels ramify, and are full of a viscid fluid. Under, and among these cells, a canal runs along the neck of the uterus, following the curve of its horn, till it come within an inch of the ovary. This organ has been described by Malpighi, but it has not hitherto been considered in a physiological point of view, nor any attempt made to trace a similar apparatus in the human female; and yet it might lead to some discovery respecting the obscure subject of generation.

Mr. Pattison's *Edition of Burns on the Head and Neck* *.—We congratulate the profession on the republication of this valuable monograph of surgical anatomy. We have given a very minute analysis of the original work in the 13th Number of our former Series, to which we refer those who cannot procure the book. Mr. Pattison has added, in the form of an Appendix, several valuable cases of surgical operations, to show the advancement of the art since Mr. Burns wrote. From these we shall select one or two of the most interesting in our surgical department. We cannot too strongly recommend the work; and we hope Mr. Pattison, who has all the anatomical, and perhaps more than the surgical zeal of his lamented master—may be able, according to his intention, to complete Mr. Burns's original plan of a complete system of surgical anatomy. A well written life of Mr. Burns has been added to the volume by Mr. Pattison.

Flajani *on the Tensor Tarsi Muscle and its Nerves* †.—Professor Flajani, of Rome, in this paper controverts the discovery of Dr. Horner, and that of Trasmondi, mentioned above, and refers it to Duverney. It was described, he says, by Schobinger, 1730, in Haller's Disputationes Chirurgicales, tome I. In 1805, Rosenmuller gave a description, and a good figure of the

* Observations on the Surgical Anatomy of the Head and Neck, illustrated by Cases and Engravings. By Allan Burns, &c. Second Edition, with a life of the Author and additional Cases and Observations. By G. S. Pattison, Prof. of Anat., &c., 8vo. Glasgow, 1824.

† Osservazioni Storico-anatomiche intorno alla pretesa scoperta di un musculo, e di due nervi nell, occhio umano. G. Flagani, Roma, 1823.

nerves, the discovery of which is claimed by Trasmondi. See "Chirurgico-anatomica in usum medicorum et chirurgicorum." The figure of Trasmondi is said by Flajani to be bad, incorrect, and unnatural. As we have not the works referred to at hand, we cannot settle the disputed claim. Dr. Horner, we dare say, will reply.

II. PHYSIOLOGY.

Dr. Bostock's *Elementary System**.—A treatise on physiology, is a novelty in our English medical literature. We have hitherto been dependant on our continental neighbours for all our systems and text books on physiology, though some of the most illustrious discoveries in the science have been made in England. Dr. Bostock has set himself laudably to do away this our reproach, and has here published the first volume (we know not how many is to follow) of his system. As we shall probably give an analysis of it soon, we shall only mention at present, the subjects which Dr. Bostock has discussed. The introduction comprehends the history of the science.

The author then goes on to the subjects of membrane: bone; its form, structure, chemical composition, formation, and vital properties: muscles; their form, structure, chemical relations, physical properties, use, mechanism, and theory of their contraction: nervous system; its vital powers, faculties, and operation, with its use, its connexion with the muscular system, and an arrangement of its functions: circulation; description of the heart and its appendages, history of the discovery, mechanism, vital properties and actions, efficient causes, with the theories of inflammation: the blood; progress of animal chemistry, nature and properties of blood, fibrin, red particles, serum, serosity, and different states of the blood.

Nasse's *Anthropological Journal*†.—This journal is very comprehensive in plan, embracing not only physiology, properly so called, but morality, metaphysics, and mental philosophy, as well as the philosophy of history. Among other subjects, the Editor touches upon phrenology for the purpose of dissenting from it, and giving his own creed, which is a kind of Platonism, assigning the feelings to the breast, and the desires to the belly!

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* An Elementary System of Physiology. By John Bostock, M.D. F.R.S., &c. Vol. i. 8vo. Lond. 1824.

† Zeitschrift für die Anthropologie; von Freidrick Nasse. Leipzig, 1823.

On the Colours of the Choroid Coat of the Eye in Vertebral Animals. By M. Desmoulins *.

This memoir serves to show how utterly impossible it is to understand perfectly the physiology of sight, when the structure and condition of the eye in the human subject only are taken into account. The dark colour of the pigmentum nigrum is commonly supposed to be a necessary condition of perfect vision, and to serve the purpose of absorbing the superfluous rays of light; the latter part of the opinion is doubtless correct, but it will be seen, as we proceed, that the other assertion was much too general and quite unfounded. If a dark choroid were essential to perfect vision, it is evident that the varied colours of the tapetum in different animals should be in an equal degree detrimental; but as we shall find, the fact is just the reverse.

M. Desmoulins commences by stating, that even in the best treatises of comparative anatomy, the extent of the tapetum has been much under-rated, and its situation incorrectly described as being confined to the side of the eye, opposite to the entrance of the optic nerve. His own researches have enabled him to assure himself of both these circumstances: thus in the cat tribe, and in the porpoise, in the sturgeon, squali, glaucus, sea-calf, and galeus, (fishes) all the concavity of the choroid is of a pearly white, with metallic lustre; in some, as the cat and sturgeon, as bright as silver: in the squali, a zone of the choroid next the iris is black, but it is narrower than the shadow of the iris, and consequently cannot receive any rays of light. In the whale, all the choroid is uniformly of a pearly white; the same is the case in the ostrich, the only bird in which that membrane is not black or dark brown; in the sturgeon, and some rays, the posterior surface of the iris also reflects; in the white and ringed (bouclée) rays, the inferior segment of the eye, less than one fourth of the hemisphere, is black; the rest is pearly white. In the horse, ox, stag, roe, and goat, about the upper two thirds of the choroid, and never less than half, are, according to the species, of a bright golden green, or of a delicate sky-blue, the reflection varying through the different shades of these two colours. In different kinds of dogs, the colour is white, of different shades, with a tinge of blue; in the harrier, the reflecting surface is at least one fourth larger than in the others. In the brown bear of Europe, the choroid is of a dull golden yellow; in the black bear of America, it is a clear sky blue. In all cases (excepting

* Memoire sur l'usage des Couleurs de la Choroïde dans l'œil des Animaux Vertebrés; par A. Desmoulins, D. M.—Magendie, Journal de Physiologie Exp. Jan. 1824.

the cats, the cetacea, the phocæ, the sturgeon and squali, in which the whole of the choroid reflects,) the colours extend more over the superior than the inferior segment of the eye.

The reflecting surface also forms invariably at least a fourth of the whole extent of the choroid, and always corresponds to the polar segment of the eye, whatever the relation of the optic nerve to that segment may be. The extent of the reflecting surface is still more extensive if it be compared with that part of the eye on which images are formed, because all the anterior zone of the choroid is shaded by the iris. The reflecting surface, therefore, corresponds to the axis of vision. Besides the animals above mentioned, M. Cuvier has observed the brilliant colours of the tapetum in the carnivora, ruminantia, pachydermata, solipeda and cetacea.

In connection with the colour of the tapetum, M. Desmoulins notices the form of the pupil; in cats the pupil is susceptible of every degree of dilatation from an almost linear contraction to a circular extent, nearly equal to that of the cornea: they also have the choroid more reflecting than any other animal, and it is well known that they see better than any others by night. Next after the cats, in the degree of reflection, come the horse and the ruminants; in them also the pupil is elongated, and more so in a strong light, becoming round in the dark; it is well known that they are nyctalopes. A large portion of the dog genus have a vertical pupil like the cats, and have also nocturnal habits; in the toad and viper the pupil is linear, and these animals seek darkness; but in all these M. Desmoulins has not ascertained the colours of the choroid. In the frogs and the genus coluber the pupil is circular, the choroid black, and they are all diurnal animals. In the rays, with a reflecting surface of the choroid, the pupil is contracted by a peculiar, but well known mechanism; a little flap descends from its upper margin, unattached in two-thirds of its circumference, and looped up by eight or nine little bands. When this flap is lowered it closes more than three-fourths of the pupil, leaving uncovered only a little fissure at its lower semi-circle; the consequence is, that all rays of light coming from above the horizon, and most of those parallel to it, cannot enter the eye; those only which are least oblique and come from below the horizon are admitted; those which are more oblique are intercepted by the great lateral projection of the fins. In all the rays possessing this structure, the upper segment of the eye, at least one third of it, is flattened, and it is on this flat surface that the oblique rays coming through the fissure in the pupil impinge.—The squali are the only animals in which much more than half

of the choroid is reflecting with a circular pupil. Hence it will be seen that there is a constant connection between the longitudinal form of the pupil and the brilliant colours of the choroid; on the other hand, there is not, to M. Desmoulins' knowledge, any animal with a black or brown choroid, in which the pupil contracts longitudinally.

M. Desmoulins refutes the common opinion that all nocturnal animals are necessarily nyctalopes; so far is this from being the case, that in many the optic nerve does not exist, consequently there cannot be vision of any kind; this is the case with the mole, the chrysochlore, the campagnol, and the mus zemni; in others the nerve is extremely minute, as in the hedgehog, most bats, and the strix flammea. From his researches he also considers it as at least doubtful that any true nyctalope has a dark choroid.

In diurnal animals with coloured and reflecting choroids, the effect of these colours, it is well known, is not that of making vision confused. M. Desmoulins refers to the natural history, and to the daily observation of the stag, roe, chamois, horse, &c., in which at least two-thirds of the bottom of the eye are coloured and reflect; the excellence of their sight by day coincides with, and depends upon, these colours, which constitute the only difference between their eyes and ours; and as those which see better than us by day under those circumstances, see also better by night, their nyctalopy depends upon the same cause. In them, as in the cat tribe, the double faculty of seeing equally well by night and by day, renders the longitudinal contraction of the iris necessary, to measure, by adequate diminutions of the pupil, the quantity of rays properly adapted to the intensity of the luminous medium in which they are placed, and proportioned to the reflecting powers of the choroid, the degree of linear contraction increasing with the brilliancy of the surface of that membrane.

It has been already stated, that the eye of the porpoise presents a mirror of a pearly white on the choroid; according to M. Cuvier the same is the case in the dolphin, and a preparation in the Museum of Comparative Anatomy, shews the same fact in the whale. There is, in these cases, a relation between the existence of this reflecting surface and the perfection of vision: Capt. Scorseby states, that whales see in the water at very great distances, and that it is much easier to get near them in green, than in clear water.

The superiority of an eye, having a reflecting surface, over one without it, evidently depends on the reflection, causing the ray or image to pass again through the retina, which has already

received two impressions, one on each surface; in the case of reflection therefore, there are four contacts of the ray with the retina, instead of two, as in the case of the extinction of the ray by an absorbing choroid behind the retina. The intensity of this reflection may be conceived by considering that the transparency of the retina between the vitreous humour and choroid is such, that the colours of the latter are as brilliant when seen through it, as if they were in clear water. The result here is the same as when the retina is folded, (as it is in certain animals,) the contacts of the ray or image with the retina are multiplied, though by a different mechanism. When the retina is folded twice, three, or four times, there are four, six, or eight contacts, two for each fold; the folding proves that the degree of impression is proportioned to the extent or number of the surfaces touched by the ray or image; if this multiplication of contacts were not the object of the folds, the thickness of the retina would be uniform, and comprised between two surfaces, instead of four, six, or eight, as happens in certain birds and fishes.

It is commonly supposed that the colour of the choroid in man is uniformly black, but M. Desmoulins and J. Petit, whom he quotes, state, that in infancy it is perfectly brown; that, at the age of twenty, it is less so; that at thirty it begins to assume a dark grey colour; that as life proceeds this colour becomes lighter, so that at eighty it is almost white.—M. Desmoulins suggests the following physiology of these changes: with the progress of years all the nervous organs become less sensible, the retina among the rest; hence, therefore, the progressive formation behind it of a reflecting surface instead of the absorbing one originally existing, becomes a means of compensation of this senile diminution of nervous sensibility.

After having pointed out the object of these reflecting surfaces, says M. Desmoulins, it would be necessary to determine the relative power of each surface, and of each of the unequally reflecting segments in the same eye; the irregularities of the curvature which may cause the formation of different centres of reflection in the same eye; and lastly, the modifications induced in these reflections by the refraction of the media in which they operate. This part of the undertaking however, being purely mathematical, lay out of M. Desmoulins' ordinary sphere, and other occupations prevented his obtaining the assistance of a mathematical friend, a Member of the Institute.

We may be allowed to remark that, like many other writers, M. Desmoulins has rendered it rather difficult to understand in some instances to what animals he alludes, by making use of the

popular or trivial, without at the same time mentioning the scientific, names, in so doing the great advantage of artificial arrangement is lost, which consists in the facilities it affords for the purpose of communicating precise information in natural history, comparative anatomy, and physiology.

Bellingeri *on the Electricity of the Blood**.—The experiments formerly made respecting the electricity of the blood by Hales, Vassali, Pfaff, and Rossi, have been repeated and extended by M. Bellingeri, who has laid down the following conclusions:—That in inflammation there is a manifest diminution of electricity in the blood, and that it returns as the disease abates in violence. The contrary takes place in chronic diseases. On issuing from a vein, the blood does not constantly give signs of positive electricity. In some cases of severe inflammation, the electricity is negative. In cases in which the blood exhibits the buffy coat, its electricity at the moment of detracting, is not so great as in the state of health. When the electricity is greater than in the state of health, the buffy coat is not formed. In general, at the commencement of venesection, the blood is deeper in colour, more dense, less fluid, and less electric than that which flows at the end of the operation. The electricity of the blood taken from a vein, has a tendency to bring its electricity more or less speedily into equilibrium with that of the atmosphere. The blood upon which a buffy coat forms, preserves longer than any other the electricity it had when detracted.

Krimer *on the Physiology of the Blood*†.—The blood appears to be attracting a good deal of scientific attention at present, paving the way we imagine to a re-adoption or a modification of the old humoral doctrines. M. Krimer, has only published one volume of this work, containing the qualities of the blood, among which he reckons its Hunterian vitality; the chemical properties of the blood; the causes of its change of colour by respiration, and by the influence of the nerves; its coagulation, of which we have treated copiously in our above review of Dr. Scudamore's work; and the qualities of the blood in different species of animals. In the second volume, which the author promises, he intends to treat of the functions of the blood.

Dr. Carson, *on the Suction of the Veins*‡.—In a reply to a paper by Dr. W. Philip, in the last volume of the Medico-Chirurgical Transactions, controverting the supposition of the

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* Memoire della reale Accademia delle Scienze di Torino. Tom. xxiv.

† Versuch einer Physiologie des Blutes, von M. Krimer. Leipzig, 1823.

‡ Edinburgh Medical and Surgical Journal.

blood being returned through the veins by suction—Dr. Carson says:—

"The objection which he has made is, that the veins being vessels, the coats of which are yielding, are unfit for being the channels for raising blood by suction, as their sides would, upon application of that power be drawn together, and the vessels of course, shut. But the doctor does not take into consideration, that this objection can only apply to vessels, through which a fluid is to be raised of a greater specific gravity than that in which the vessels are placed; if water, for instance, is to be raised to a height through the air by pumping, the stem of the pump must necessarily be strong enough to resist a collapse of its sides, in consequence of the difference between the weight of a column of water and that of the same column of air. But if the water is to be raised through the same medium, that is, through water, then an yielding vessel is sufficient; for the pressure on the internal surface of the tube is equal to that upon its external surface. The pumping of the water through the tube could not, in this case, cause a collapse in the sides of the vessels, if these vessels were once dilated by the fluid in which they are immersed. But, as the animal fabric may, so far as respects the point in discussion, be considered a vessel filled with blood, the veins are immersed in a fluid of the same specific gravity with that which passes through them, and therefore cannot have their sides drawn together by suction originating in the chest, however remote those vessels may be from the heart. The objection stated by Dr. Philip, had, at the time I published the Inquiry into the Causes of the Motion of the Blood, considerable weight with myself; and I conceived and stated, that a share of the power derived from the heart and arteries was extended to the blood in veins, for the purpose of preventing the sides of those vessels from being drawn together. But I now think that such a supposition is unnecessary. In this opinion I have been more confirmed, by considering the cause of the vacuity of the arteries after death, when blood is circulated through its whole course by the suction derived from the elasticity of the lungs alone."

Dr. Williams, *on the Circulation of the Blood**.—Dr. Williams concludes an elaborate paper, on this difficult part of physiology, by the following summary. He supposes the left ventricle in the state of diastole.

"By its systole, a quantity of blood is thrown into the system of the great aorta, which communicates an impulse to the blood already contained in it. The momentum given to the blood by the first impetus, is partially expended on the dilatation of the vessels; for the augmentation increases their diameter, though inappreciable by our senses. The vessels being elastic, as well as irritable, recoil on the blood, by which they were distended, and first of all their

† Edinburgh Medical and Surgical Journal.

trunk, from its sustaining the more immediate impetus of the ventricle. By this re-action, the blood receives a fresh impulse. As we trace the arteries towards their extremities, their elastic property gradually decreases, while the irritable increases, and also its influence as an impulsive agent. At length we lose sight of the effect so characteristic of the action of the first impetus, and we are no longer able to detect the elastic property in the coats of the vessels. We now find, in a very considerable portion of the greater circulation, the irritability of the vessels alone adequate to the impelling of the blood along the channels. Thus, by the combined influence of the left ventricle, and of the elasticity and irritability of the aortic and caval systems, the blood is conveyed from the left side of the heart, through the greater circulation, to the right side, with sufficient momentum, when it arrives at the right auricle, to distend it when in a state of relaxation, and, during its systole, to act as a buttress to its contents, so that it may direct its whole power against the relaxed ventricle, which it is its office to replenish. The right ventricle gives the first impulse to the blood in the less circulation, in the same manner as the left ventricle does to the greater circulation; and also the dilatation of the right and left chambers of the heart are affected by similar powers."

Dr. Brewster, *on the Accommodation of the Eye to different distances* *.—On this extremely difficult and disputed subject, Dr. Brewster concludes from an experiment made upon viewing a near object,

1st. "That the contraction of the pupil, which accompanies the adjustment of the eye to near objects, does not produce distinct vision by the diminution of the aperture, but by some other action which accompanies it."

2d. "That the eye adjusts itself to near objects by two actions, one of which is *voluntary*, depending wholly on the will; and the other *involuntary*, depending on the stimulus of light."

3d. "That when the voluntary power of adjustment fails, the adjustment may still be effected by the involuntary stimulus of light."

"It appears to me impossible to avoid the conclusion, that the power of adjusting the eye depends on the mechanism which contracts and dilates the pupil; and, since this adjustment is independent of the variation of its aperture, it must be effected by the parts which are in immediate contact with the base of the iris.—The mechanism at the base of the iris, may be conceived to produce the adjustment in four ways. 1st. By elongating the eye during the contraction of the pupil. 2d. By increasing the convexity of the cornea. 3d. By altering the convexity of the capsule of the lens: and 4th. By increasing the distance of the crystaline lens from the retina.—The last hypothesis is the only probable one, namely, the removal of the lens from the retina, by the contraction of the pupil,

* Brewster's Edinburgh Journal of Science.

the eye being adjusted to objects at the remote limits of its range, when in a state of perfect repose."

Dr. Brewster seems to be unaware of Dr. Jacob's paper on the eye, analysed in this Journal page 108, and founds too much, perhaps, on the "Liquor Morgagni, in which the lens floats." Dr. Jacob questions the existence of this liquor Morgagni, except in the dead eye.

Dr. Edwards, *on the Influence of Physical Agents on Life**. —The author of this ingenious volume is well known to our readers, as an enterprising experimenter in physiology. Several of his best experiments on respiration, were originally published by him in the first Series of our Journal. We need not recommend the work to those who are partial to such enquiries; the name of the author is a sufficient passport for its excellence. We shall take an early opportunity to analyse it.

III. PATHOLOGY.

Dr. A. P. Buchan's *Symptomatology* †.—The author's lecture comprehends about half the volume, the remainder being taken up with tables of symptoms, chiefly from Berkenhout, which are, for the most part, an echo of the prognostics of Hippocrates. The lecture is extremely well written, and does credit to the learning and taste of Dr. Buchan, but we are sorry we cannot say quite as much for the principles. He has a strong leaning to the humoral pathology, but that is not now so terrible a stigma as it was ten years ago. He is also a believer in crises, and lunar and planetary influences, and here we confess he seems to travel out of the record. He has added, by way we presume of curiosity, the sketches of the organic pulse according to Gruner, in his Semiotice Pathologica.

M. Belhomme's *Experiments on the Blood.*—The Revue Medicale, for March, 1824, contains an account of some experiments on the blood, and particularly on the buffy coat, made by M. Belhomme, at the Hotel Dieu, in 1823. They are much more limited in extent and importance than those of Dr. Scudamore, but as far as they go, appear to confirm his results. M. Dugés has prefaced them by some general reflections with-

* De l'Influence des Agens physiques, sur la Vie : par W. F. Edwards, D.M. pp. 564, 8vo. Paris, 1824.

† Symptomatology; or the Art of Detecting Disease. A Lecture occasionally read to the Pupils at the Westminster Hospital, and published according to their request, by A. P. Buchan, M.D. F.L.S. &c. London, Callow and Wilson, 1824.

out any obvious object, and certainly without much novelty or utility.—M. Belhomme states, that the formation of the buffy coat is favoured by an opening of medium size in the vein; by a strong, rapid, continued jet, in an arched form; and by a narrow vessel. He supposes that the nature and temperature of the vessel do not exert any influence over the phenomena presented by the blood; but that the buffy coat is generally most strong and distinct in the vessel last filled. We refer our readers to Dr. Scudamore's very precise experiments for a refutation of the first opinion. M. Belhomme states, that in pregnant women there is a constant tendency to the formation of the buffy coat, and that in them the blood possesses, what he calls, the placental odour, i.e. a smell precisely similar to that of a recently expelled placenta. He has noticed also, that in certain cases of disease the coagulum is covered, not by the buffy coat, but by a layer of a very bright red colour.

On Cellular Induration in Infants. By MM. Palletta and Carminati *.—Together with much extraneous matter and unnecessary discussion, these memoirs, especially Professor Palletta's, contain some valuable information, which we shall proceed to lay before our readers. To commence with Professor Carminati, he states that in Milan, and other cities of the L.V. Kingdom, the disease is not so frequent as it has been found elsewhere. His observations extend to a period of about forty years, and he estimates from documents, that the number averages annually twenty for Milan and its vicinity, and a very few at the Foundling Hospitals of Cremona and Lodi. In some situations it was yet unknown so late as the year 1817, at which Professor Carminati is less surprised; as at Pavia, neither he, nor his colleagues, nor his pupils, nor the attendants had ever been able to discover a single case, after the most diligent enquiry, until the spring of 1821, when he discovered one case, and demonstrated it to Professor Cairoli, and others.

Its appearance is not confined to the winter months, on the contrary, it sometimes occurs in summer. We may remark that some stress is laid by the continental pathologists on this point, as they think it necessary to refute the absurd, and as we suppose, obsolete opinion, that the disease is produced by the congelation of the adipose texture. It occurred principally in

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* Ricerche sopra la malattia dei neonati detta volgarmente indurimento cellulare; del Prof. G. B Palletta. (Memoria letta al C. R. Istituto nell' adunanza del di 7. Agosto, 1823.)

Sull' indurimento cellulare nei neonati, Memoria del Sig. B. Carminati. Prof. Emer. di Patologia. Letta al C. R. Istituto Lomb. Veneto. in un' adunanza del 1822.) Omodei Annali. Fac. 82-84.

children born prematurely; in twins, in those (foundlings,) received too late, or not properly fed, in those born of mothers in a state of fever or bad health.

"Contrary to the usual fatality of the disease in other countries, about a third with us," says Professor Carminati, "survive and recover. So also, we are told, that elsewhere the disease is confined to foundlings, and the children of the poor, whilst with us some of the subjects belong to those of the higher classes of life. From the limited number of cases, he infers that the disease is sporadic, and not epidemic; and from its diminished severity and mortality, he concludes that of late years it has lost a part of its activity. So also from its not existing in some places in the immediate vicinity of others in which it prevailed, the operation of general causes, such as atmospheric influence, is excluded. The causes, he thinks, may be looked for in a certain disposition, acquired whilst in the uterus of a feeble or unhealthy mother."

Professor Carminati states, that previous to the year 1780, the disease was unknown by description and personal experience even to the oldest practitioners, who were totally at a loss in what light to consider it, or to what kind of disease it should be referred; in the years 1814 and 15, the number of patients was twice that of any other year.

We turn to Professor Palletta for an account of the symptoms, &c. The principal sign is swelling and redness of the integuments of the legs and feet, extending even to the thighs, to the abdomen, and sometimes to the chest, together with extreme coldness not to be dissipated by the warmest topical applications. The cutis assumes a reddish yellow, or livid colour. The child cannot suck, cries faintly with a weak plaintive voice, the rigidity of the skin prevents the motion of the limbs; the face is contracted, senile, stupid, and death follows with great tranquillity. With the assistance of Sig. F. Billi, Professor Palletta examined several children both premature and full grown. The colour of the body was in general yellow, and this was deeper in hue if there was affection of the liver. The cheeks and temples were sunk, the extremities rigid. The contents of the adipose and cellular textures were seldom fluid, more commonly viscous, and mixed with globules of fat. In one subject eight days old, the cellular texture was indurated without any effusion of lymph, but fluid blood was collected between it and the muscles, shining through the skin, and giving it a livid appearance. These, however, are but superficial effects of the disease, which exists in the principal cavities. The head is frequently affected. The bones of the skull sometimes appeared to contain much blood, the subjacent membranes as well as the surface of the brain, being throughout injected with red

fluids. The substance of the brain retained its natural colour, and was rather more firm than natural. The sinuses were full of dusky-coloured blood, as were all the veins at the base of the brain. The viscera of the thorax were generally still more affected. The lungs for the most part were not developed; occasionally there existed in their centre, dark, firm, sanguineous congestions, resisting pressure, and sinking in water. Occasionally one lung was altogether loaded with blood, hepatized, rigid, weighty, and sinking in totality; at others, one lung, particularly the right, had become pervious to air and soft, some lobuli, however, remaining hard, dark and impenetrable to air. When the right lung was little loaded with blood, the left was very much so, being heavy black, and resisting. On inflation, the air cells expanded, the blood penetrated, (?) and the lung assumed a bright red colour, only a few black points remaining on the surface. In some cases the lungs on both sides were dark, the left always most so; if air was impelled with moderate force, the blood did not penetrate them; if with considerable force, the air cells became red, and the lividness disappeared; but in the parenchyma, a hard knot always remained, shewing that the organ had not been altogether freed from the contained fluids. At other times all the right lung, except its upper part, was so loaded with blood, that air could not enter; and when cut into, much black blood escaped. The condition of the heart and great vessels was in relation with that of the lungs: generally speaking, the whole venous system, the jugular, coronary, cavæ, the porta, the saphenæ,&c., were distended with an unusual quantity of black blood. The same appearances existed in the abdomen. The organ principally affected was the liver; it was either of a dusky red colour, or tumid, heavy, and in a state approaching to inflammation, or actually inflamed and much indurated. When the liver was inflamed, the intestines were generally affected in the same way, and red or transparent lymph was effused within the abdomen. In accounting for these appearances, Professor Palletta states that he has convinced himself that in new born children the lungs are not suddenly dilated, and that a period of at least eight days is required to effect the passage of air into the lobules of both lungs; he confirms also the assertion of Portal, that respiration is at first confined to the right lung.

Case of perforation of the Stomach and Peritoneal Tympanites, ascertained during life. By M. Meriadec Laennec*.

"J. B. Beneux, aged 57, entered the Hospital de la Charité,

* Revue Medicale Mars. 1824.

December 4, 1823. The pit of the stomach presented an indistinct, indolent tumour, apparently arising from the left lobe of the liver. It had existed a year, and was the consequence of a blow. It had produced but little effect on the patient's health; he had appetite, did not vomit, and was free from fever. He was tolerably stout, and presented none of the external appearances of a chronic disease. He remained in this state nearly a month in the hospital, having a three-quarters ration, and taking some unimportant medicines.—Professor Laennec considered him as a hypochondriac, who wished to take up his winter quarters in the hospital.

"About January 1st, 1824, he began to experience nausea and vomiting, at first occurring in the morning only, the ejected matter consisting of tenacious inodorous mucus. But after a short time, the food itself was rejected, soon after it had been swallowed, and from that period emaciation commenced, and the skin assumed a slight yellow colour. The tumour remained unchanged in every respect, except that it could not be pressed forcibly as before without causing pain to the patient. The vomiting led M. Laennec to conclude, that this tumour was scirrhus of the stomach. Jan. 15th, the matters vomited began to appear brownish, and soon resembled the grounds of coffee. On the 19th, about five in the morning, the patient was suddenly seized with exceedingly acute pain in the abdomen, immediately after having swallowed some broth. At ten, M. Laennec found the abdomen tense, extremely painful when touched, resonant on slight percussion; the countenance drawn up; the pulse concentrated, very small, and very weak. From these symptoms, his diagnosis indicated rupture of the stomach, in the situation of the scirrhus, peritonitis, and abdominal tympanitis. The tympanitis he recognized by a sensation like that which might have been produced by a sheet of parchment placed in the abdominal parietes, and discoverable on pressing, or very lightly striking the anterior part of the abdomen. (Twelve leeches, low diet.) In the evening, the pain had diminished, and was felt only under the false ribs, on both sides. 20th.—The abdomen still tense and painful; tongue red, and dry; pulse scarcely sensible; the patient, however, suffered less. (Six leeches to each side of the abdomen; whey, low diet, &c.) 21st.—The abdomen much less tense, and scarcely painful; it presented a slight fluctuation. The vomiting of substances like coffee grounds more copious; pulse scarcely to be felt. 22nd 23rd and 24th.—The patient became more and more weak. From the time of the rupture of the stomach, emaciation had proceeded with inconceivable rapidity; yet he suffered less, and even asked for broth, which did not seem to increase the pain or vomiting. He died at ten in the evening, of January 24.

Dissection.—"The abdominal parietes presented a greenish shade, owing to commencing putrefaction; although retracted, they gave on percussion the same clear tympanitic sound that had been remarked during life. When divided, a considerable quantity of almost inodorous gas escaped, which was evidently contained

within the bag of the peritoneum. It also contained about two pints (quarts English) of a turbid fluid of a brownish yellow colour, in which floated many little irregular flocculi, of a dull white colour, and readily yielding under the finger. The peritoneum itself did not appear changed in colour or thickness, except in the portion forming the mesentery, in which were remarked little irregular violet spots, evidently occasioned by ecchymosis. The liver large, and of a dark brown colour, presented several projections on its convex surface, their centres being depressed in a funnel shape. The colour of the projections was yellowish white. When detached and cut into, the liver was found to contain ten or twelve tumours, of spherical shape, pale yellow colour, and of a size varying from that of a large nut, to that of an apple. Some of them were surrounded by the substance of the liver; others projected on its convex surface. All were composed of a dull white substance inclining to yellow, and of the consistence of a raw apple. In some, this substance alone existed; in others, it was mixed with tuberculous matter, collected into little irregular masses contrasting with the rest of the tumour, in several instances softened in the centre; in others, presenting small ecchymoses. The tumours were connected to the substance of the liver, by fine, easily lacerable cellular substance, but without being encysted. The gall bladder contained green bile, which had transuded and stained the neighbouring parts.

"The stomach was rather small, and on its anterior surface were some wrinkles converging towards the middle of the lesser curvatures. Cautiously raised, its posterior surface presented near the same curvature a small elliptic ulceration, in the centre of which was a little hole, which had given passage to the fluids contained in the organ, and communicating with an ulceration of much greater extent on the internal surface, around which the parietes of the stomach were considerably indurated and thickened. They contained or were composed of a greyish, semi-transparent substance, like the skin of bacon, and a second of a milky whiteness. At some distance from the ulceration, the membranes of the stomach could be recognized, the muscular being thickened and the mucous very red. In proportion to the distance from the ulceration these appearances diminished, and at last disappeared. The pylorus was unaffected. The stomach and intestinal canal contained a brownish fluid, similar to that vomited during life. The pancreas, firmly united to the stomach, was in great part also converted into an encephaloid substance (Medullary Sarcoma?) of a milky white colour and very firm; its large extremity was alone unaffected. All the other viscera were healthy."

Polypus Concretion in the Bronchial Tube. By M. M. Laennec.

"Catherine Ledger, aged 15, entered the hospital July 13th, 1823. Her complaints had existed a month or five weeks, and had begun

with acute pain in the left side of the chest, succeeded by fever, dyspnœa, cough, and spitting of blood. On her admission, she presented the following symptoms: slight fever, with evening exacerbations; dull pain in the left side of the chest; slight dyspnœa, frequent fits of cough, with expectoration of semi-transparent greyish sputa, moderately viscous, and sometimes streaked with blood; the chest sounded well on all the right side; on the contrary, the sound of the left side was in every part dull. The respiration perfect on the right side, could on the left be heard only between the scapula and vertebral column, and in front along the sternum. There was neither egophony nor pectoriloquism. The pulsation of the heart did not present any thing remarkable. The diagnosis formed from these symptoms was chronic pleurisy of the left side. The pain was removed by one bleeding and two applications of leeches. Tartarized antimony had been prescribed on the first day in the dose of *six grains* a day. But the patient not being able to support its use, M. Cayol, who was on duty, discontinued it, and ordered frictions with the pomatum of Autenrieth (Ung. Ant. Tart. Angl.), which soon produced a copious eruption of pustules. Aided by proper regimen, &c., these measures brought about considerable improvement. The patient recovered strength and appetite; the fever and dyspnœa diminished, as well as the cough and expectoration; though the left side of the chest still sounded obscurely, respiration appeared to improve. The patient remained a considerable time in the hospital without improving further. This state of stagnation excited a suspicion of the existence of tubercles, and she was advised to go into the country.—She left the hospital on the 8th of September, and returned on the 30th, having had copious hæmoptysis a few days previously, accompanied by an attack of pain in the left side of the chest. On the supposition of acute pleurisy, a physician had bled her twice, made one large application of leeches, and put a large blister on the side. This treatment had removed the pain and hæmoptysis, so that she was just in the same condition as when she left the hospital. She was placed on low diet, and the use of pectoral drinks.—About the beginning of November, copious hæmoptysis took place twice or three times, and as often yielded to the application of leeches. But the fever, which had been trifling, became great and more constant; decubitus on the right side very difficult; the cough more frequent; expectoration more copious. The left side continued to sound obscurely at the back part and under the axilla, respiration being inaudible in the same extent; in front, the sound was rather more distinct and respiration tolerably audible. Still, however, there was a great difference in this respect between the two sides of the chest, particularly below the clavicles, which led M. Laennec to suppose that in addition to effusion within the pleura, a considerable number of tubercles existed in the upper part of the left lung.—November 17th. This opinion was confirmed by evident pectoriloquism below the left clavicle. From that time, the patient grew weaker and weaker;

the cough, fever, and dyspnœa increased; repeated hæmoptysis took place, together with night sweats and diarrhœa. But the most extraordinary symptom was dyspnœa occurring in fits, during which the passage of air through the trachea was sibilant, and so loud that it might be heard at the distance of thirty paces; at such times the face became purple, the limbs cold, the pulse almost insensible, and the patient appeared about to expire; when the fit was over, she could speak, drink, and take food. Examined during the fit (by the stethoscope), respiration was inaudible, and replaced by a slight sibilant rattle in the whole of the right side, where at other times it was puerile. The most powerful antispasmodics were employed without relieving these fits, or preventing their occurrence, and the patient died January 2d, 1824.

Dissection.—"The left side of the chest was evidently smaller than the right, and gave a dull sound on percussion, as had been the case during life. The right lung, large and elastic, was connected to the pleura costalis by only a few firm bands. It crepitated throughout, and presented a moderate accumulation of blood at its posterior part, evidently subsequent to death. The left lung, small, flattened, compressed towards the mediastinum, adhered to the pleura costalis throughout, by means of a greyish lamellar membrane, having the colour and appearance, but not the firmness of the skin of bacon, and forming many cells filled with a yellowish semi-transparent, slightly gelatinous fluid. These cells, largest at the base of the lungs, became smaller towards the upper part, and at top disappeared, the membrane forming them, at the same time becoming more firm, whiter, thicker, and ultimately terminating in a fibro-cartilaginous layer, covering the top of the lung. The latter, small, flaccid, compact, not crepitating, presented at its upper part several tubercular excavations communicating with each other, and more or less filled with tubercular matter, softened to the consistence of pus. Every where else it was filled with such a number of tubercles, that its texture had almost entirely disappeared, except towards the surface of the organ, where a layer, two or three lines thick, remained, serving as a covering to the mass of tubercles. Of the latter, some were firm and rather dry, of a yellow colour, like that of a boot top; others were as white and as friable as moderately moistened chalk; others of a pale yellow, and more or less softened; none were grey or semi-transparent. The layer of lung surrounding them was compact, of a slate grey colour, and infiltrated with gelatini-form serosity. The left bronchus was almost entirely filled by a cylindrical body, an inch and half long, four or five lines in diameter, becoming more slender in the bronchus, and presenting a distinct, round, and smooth swelling at its tracheal extremity. This swelling exactly corresponded to the union of the bronchi with the trachea; and as it adhered to the mucous membrane only at one point, it was slightly moveable, and by the least change of position closed both bronchi at the same time. Its texture was compact, like that of the polypiform concretions of the heart and

arteries, but much more firm; its colour internally was white, with some shades of red and yellow, and some small blood vessels could be distinguished; there was a greater number on its surface, which was of a violet colour. This concretion adhered for a very small extent to the angle of division of the bronchi, but so closely that it could only be removed by pulling away a portion of the mucous membrane; the latter was very red in a few points. The edges of the glottis were tumid and a little œdematous. The pericardium contained three or four ounces of yellow serum. The heart presented nothing remarkable. The peritoneum was sound. The lining membrane of the stomach was reddened around the pylorus; that of the duodenum in some points; of the jejunum throughout, gradually diminishing towards the ileum, where the redness existed only on the edges of the valvulæ conniventes, and so continuing throughout the large intestines. The remaining viscera of the abdomen were healthy—and the brain was not inspected."

Dr. Abercrombie, *on Schirrous Pylorus**.—The symptoms of this certainly fatal, but often deceptive complaint, are more obscure than we might *a priori* be led to imagine, from the usual sensibility of the organ and its importance in the animal economy. Frequently, there is little more than moderate dyspepsia, with sometimes dull, and sometimes violent pain, coming on in paroxysms and again ceasing for a considerable interval, giving hopes, always fallacious, that the disease has been got under. Among the cases which Dr. Abercrombie has given an illustration, we select the following:—

Case.—"A gentleman, aged 30, was for several years liable to paroxysms of pain in the stomach. The pain usually continued for several hours, and went off with vomiting, and returned at uncertain intervals, frequently of many weeks. Upon several occasions, he appeared to have got entirely free from it. He was in other respects in good health, except being considerably troubled with hemorrhoids, until about a year before his death, when he was suddenly seized with copious vomiting of blood. This soon went off, and in a few days he was in his usual health; but from this time his former complaints rather increased. These attacks of pain, followed by vomiting, were more frequent, and he was again several times attacked with vomiting of blood, but still he had considerable intervals of health; no hardness could be discovered by examination, and that uniformity of symptoms was entirely wanting, which usually accompanies organic disease. His death was rather unexpected. After having complained for two days of pain in his stomach in the usual form, he was found in the morning of the third day exhausted and without pulse, and died in a few hours. Three days before his

* Edinburgh Medical and Surgical Journal.

death, he was able to walk out a good deal, and made no particular complaint."

Dissection.—"The pylorus was surrounded by a mass of scirrhus, the size of an orange, very firm, and nearly cartilaginous. Among the intestines, there were extensive adhesions. The body of the stomach, the liver, spleen, and pancreas, were healthy. There was some ossification of the valves on the right side of the heart, and the right auricle was remarkably distended with coagulated blood. The lungs were healthy."

On Sublingual Pustules in Hydrophobia. By Dr. Xanthos, of Siphnus, in Greece *.—

"At the end of January, 1823, as many of my countrymen, compelled by the events which occurred in our country, were travelling from Russia through Germany to Marseilles, I saw one of them who came from Trapezunt, who had been bitten by a dog in Hanover. He had a considerable wound in the middle of the right thigh, which pained him in walking. Notwithstanding my advice, that he should stop on his journey till the wound was healed, he insisted on setting out the same day with his countrymen, and took nothing with him but a little mild salve. Early in the month of May, I met this man again, with 27 of my countrymen, in Zurich, and was happy to find the wound in a short time completely healed. The man said it was a lucky circumstance that the dog was not mad; upon which a Greek, from the Peloponessus, considerably advanced in years, and well acquainted with the customs of our country, observed, that if the dog had been mad, it would not have been of much consequence, all that would have been necessary was to cut out the *Lyssais* as soon as possible; I immediately put the question to him, 'What do you mean by the *Lyssais?*' He replied, 'In persons who have been bitten by mad dogs, there appear on the ninth day, little blisters on the tongue, which we call *Lyssais;* these must be cut off with a sharp knife, and the bleeding suffered to continue till the poison is discharged.

"Acquainted with the information which Dr. Marochetti had communicated on this subject, I considered the testimony of this old Greek extremely important. I inquired of my other countrymen, who had lived in various provinces of Greece, whether they were acquainted with this practice; most of them answered in the affirmative; some assured me that they had often witnessed it.

"As my countrymen were too much dispersed in different places to enable me personally to obtain particular information on this subject from each of them, I sent certain questions from Heidelburg, and obtained from Haran, the following answer from Polychronis, a Thessalian:—

"If a man is bitten by a mad dog, on the ninth day small blisters, called *Lyssais,* appear under the tongue; they are about the size of a pea, some of them smaller; they are rather dark coloured, and

* Hufeland's Journal der Praktischen Heilkunde.

look like flesh.—They are situated on the under side of the tongue, near the membranous band, particularly on the side of the veins. If you observe the tongue of a sound man, and then examine that of a man who has been bitten by a mad dog, you will immediately see the difference.

"As soon as these *Lyssais* are observed, they must be cut out with a sharp knife, and the bleeding continued, till the poison is discharged. If this is neglected, or deferred too long, as for instance till the twentieth day, the brain becomes affected, and the patient will die in deplorable convulsions.

"Seven Greeks, who were staying at A——, partly natives of Thessaly and Epirus, and partly from the islands of Greece, confirmed this testimony. Another from Lagura, near Larissa, wrote to the same effect, adding that in his country after the *Lyssais* had been cut out, and the wound suffered to bleed a considerable time, a red hot iron was often applied to the part for several days. An Epirot, K.W. wrote me word from Basil, that in his country, when the *Lyssais* were cut out, and the wound had bled copiously, it was the custom to rub it with garlic and common salt. He assures me that he has often seen this done, and that when this plan has been carefully pursued, the patient after the fortieth day is out of all danger. He adds, that the inhabitants of the neighbouring mountains, after the *Lyssais* have been cut out, wash out a gun-barrel with water, and make the patient wash his mouth with the rincings.

"Thirteen Greeks staying at Basil confirmed this testimony, with some slight variations.

"A Peloponnessian, 80 years old, who had been in trade from fifteen to twenty years, in Russia, who had since resided at Odessa, and who is now in Switzerland, tells me that he has often employed this method in Russia, with the happiest success.

"In some parts of Greece, it is the custom to apply squeezed river crawfish to the bitten part; a drink is also prepared by squeezing these crawfish and pouring upon them wine or water. The inhabitants of many provinces of Greece have great faith in the efficacy of crawfish in cases of hydrophobia, and use them both internally and externally.

"They do not neglect also to treat the bitten part by burning, excision, escharotics, &c.

"From all this information it appears, that the treatment of hydrophobia throughout Greece, is the same, namely, by excision of the *Lyssais*. A question now arises, whether the peasant by whom Marochetti saw this treatment successfully employed, learnt it from a Greek, or in Greece itself. That it had its origin in Greece, is evident from the name *Lyssais*, which is used throughout that country. Mr. Sieber, the traveller, has lately declared, that he has discovered a remedy for hydrophobia in Greece, which he does not, however, disclose, as he has a view to indemnifying himself by selling the secret. Whether this remedy is that which has been pointed

out, or some other, time will show. In the mean time I should have thought myself wanting in the duty which I owe to my fellow-men, if I had not as soon as possible made known to the German physicians, a plan of treatment which is universally adopted in my country, and the success of which has been testified by so many of my countrymen.—Happy shall I be if my information should contribute to the discovery of a remedy for so formidable a disease. If I should obtain any further information on this subject, I will take the first opportunity of communicating it."

IV. MORBID DISSECTIONS.

Fatal Injury of the Alimentary Canal. By Dr. Spiritus, of Solingen *.

"Some years ago, I was called early one morning, to the assistance of a young man, who, I was told, was bleeding. The patient, who appeared strong and healthy, told me that two evenings before, he had heated himself by dancing and drinking, and had since experienced a tightness across the chest. On awaking this morning, he found the tightness increased, together with a sweetish taste in his mouth, and after a little hawking, brought up some masses of blood, amounting to about twenty ounces. The blood was coagulated, of a bright red colour, and unmixed with any foreign bodies. The patient was free from nausea, but the sense of tightness still remained; the pulse was small and weak, the face pale, and covered with cold sweat. I concluded that I had to deal with an active hemorrhage from the lungs, and on that supposition ordered bleeding from the arm, a foot-bath, and an emulsion with nitre. In the evening I was again called, as a second, though slighter bleeding had appeared. There was then some fever, the pulse was hard, and 95 in a minute; but except the sense of tightness on the chest, the patient was well and tranquil. As I was about to go, his father accidentally mentioned, that the son thought that he had swallowed a five franc piece, six or seven days before, but that he, the father, did not believe it. My attention thus excited, I learned that being in company with some other young people, he stated that he had not any money about him, and when they attempted, in sport, to search his pockets, slipped the piece of money into his mouth. Whilst struggling with his companions and laughing, the coin disappeared from his mouth: at first he supposed that it had fallen out, but as it could not be found after a careful search, it became highly probable that he had unconsciously swallowed it. He did not, however, experience any inconvenience in swallowing and breathing, and eat daily with appetite, whence he concluded that the present symptoms were not connected with the accident. Nor

* Graëfe und Walther's Journal, 4ter. B. 2es. Heft.

did I myself think otherwise, as the sense of tightness, and the other causes indicated an affection of the chest, and as I felt myself warranted in supposing that the coin must have passed beyond the œsophagus and reached the stomach; once there, I was at a loss to suppose that it could cause hemorrhage, as it was of some thickness and without any sharp edge. For greater certainty, I ordered his motions to be preserved, and found on the following morning, that they contained a considerable quantity of blood; consequently that the hemorrhage took place from some part of the alimentary canal, and probably from a mechanical cause. The most careful examination of the abdomen did not give any indication of its source; the belly was every where soft, and free from pain. The patient had slept but little in the night, was much depressed, and complained, besides the usual sense of tightness, of a deep-seated feeling of pressure in the chest, and behind the ensiform process of the sternum. He could drink, however, without any inconvenience. In consultation with Dr. Landers, a solution of gum arabic with opium and sulphuric acid was prescribed, all solid food prohibited, and perfect tranquillity advised. The day passed without any particular symptoms, except that the patient grew visibly weaker; whilst we were visiting him in the evening, however, a fresh bleeding came on, and we convinced ourselves that the blood was evacuated by vomiting. The quantity was from twelve to fifteen ounces, and had such an effect that the pulse became intermittent, and was hardly to be felt. The prognosis, of course, became more unfavourable: at midnight I was again called, and though I made all haste, found the patient dead, after having again vomited a considerable quantity of blood."

Dissection.—"The body was examined on the following day: with the persuasion that we should discover the seat of injury in the stomach or the commencement of the small intestine, we first opened the abdomen, but found ourselves deceived: we found, indeed, that the stomach and intestinal canal were filled with a large quantity of blood, but we were unable to detect any injury of those organs. We therefore proceeded to the examination of the chest, and after turning aside the left lung, divided the posterior mediastinum, so as to explore the lower part of the œsophagus. Here we found a perfect explanation of the symptoms, for the piece of money immediately presented itself, having become of a black colour, and having perforated the anterior part of the œsophagus, half an inch above the diaphragm. It was closely embraced by the edges of the opening, one half of it projecting into the posterior mediastinum, the other remaining in the canal of the œsophagus. To examine the latter more minutely, we removed the heart and lungs, and remarked that they, together with the great vessels, were quite void of blood. There was not any extravasation in the cavities of the chest. The lining membrane of the œsophagus was only a little reddened, but the edges of the opening in it presented a vascular network. The direction of the wound was obliquely

transverse from left to right, so that its commencement was about three lines higher above the diaphragm than its termination on the right side.

Meningeal Apoplexy. By Dr. James Johnson *.—Lady D——e, aged 62, and of full habit, had an apoplectic seizure on the 10th December, 1822, and was found in a state of jactitation, was insensible when spoken to, her pulse weak and unequal, her skin cool, face pale, and the pupils contractile to light. Thirty-six ounces of blood were taken from the temporal artery, and sixteen more from the arm next morning, and she had calomel, a black draught, and sinapisms. The latter occasioned so much distress, that she was with difficulty confined to bed. "There was not, therefore, any paralysis present." She died on the evening of the 12th, 51 hours after the commencement of the attack.

"*Dissection.* By Sir Astley Cooper.—Mr. Freeman, Drs. Warren, and Johnson, were also present. The dura mater presented no unusual appearance. The arachnoid was somewhat thickened and opake, with a moderate effusion between it and the subsequent pia mater. The pia mater itself, whenever it extended over the whole of the hemispheres, between them, among the convolutions, and over the case of the brain, medulla oblongata, and as far as it could be seen of the spinal marrow, was infiltrated with black blood, resembling very much the tunica conjunctiva of the eye, when highly blood-shot. This state was very different from that of mere congestion of the vessels. No blood-vessels, whether veins or arteries, were distinguishable; but the texture of the pia mater seemed completely impregnated, or infiltrated with blood, so as not to change its natural appearance, but quite to obscure its vessels. Besides this general infiltration, or blood-shot condition of the pia mater, there was a considerable quantity of blood distinctly extravasated in small globular coagula, on the inner surface of the membrane, varying in size from that of a pin's head, to that of a very small pea. Whenever the pia mater was stripped of the brain, these graniform extravasations rose with it, leaving the surface of the brain clean, and of its natural colour. The brain itself was something softer than natural, but exhibited no marks of increased vascularity, no red points when sliced with the scalpel. In the lateral ventricles there was about an ounce of very red serum—a small quantity in the other ventricles and at the base of the brain—the whole amounting to about two ounces. The pia mater covering the cerebellum, was in precisely the condition of that covering the cerebrum. The lining of the ventricles had a reddish blush, but nothing like the blood-shot appearance of the pia mater. In the basilary artery and in the circulus Willisii, there were some points of calcareous deposition; but no ruptured vessel was perceivable

* Medico-Chirurgical Review.

in the brain. This dissection offers one of the most exquisite specimens of meningeal apoplexy, perhaps on record. In this case, there was no rupture of any particular vessel—no local accumulation of blood—no lacerations or excavations of any portion of brain—no partial though considerable general pressure. The physiological phenomena were in strict accordance with the pathological conditions. The blood-shot state of the pia mater, while it produced a uniform pressure over the whole of the encephalon, was sufficient to abolish, or at least suspend, the intellectual operation, without actually paralysing the muscular system, voluntary or automatic. It may be observed, that when the effects of this general pressure on the brain were mitigated by the abstraction of 36 ounces of blood, perception and intellectuality were so far restored that the patient answered questions with some degree of distinctness—a circumstance that was still more evident on the evening of the second day, after the abstraction of sixteen ounces of blood from the temples.

"It is stated by M. Serres, that meningeal apoplexy may be distinguished from cerebral, in the living body, by the absence of paralysis (the presence of sensibility to stimuli) in the *former;*—while in the latter (cerebral) there will be some degree of paralysis in one or other side, or drawing of the mouth. There was no evidence of paralysis in Lady D———'s case, for the general cessation of voluntary action during the last eighteen hours could not be called loss of power as in paralysis, but merely that state which precedes death in most diseases."

V. SURGERY.

This department, as usual, presents an ample field for selection, both from books and papers of various merit. Mr. Travers has published a third edition of his excellent work on the eye, but has made no addition to it. As most of our readers possess this work, it would be supererogatory in us to go into any details of its merits.—Mr. Stevenson, *non passibus equis;* has published a work on cataract; but as it is manifestly written more for the purpose of procuring patients than instructing the profession, we will be readily excused from analysing its contents.

Jarrold, *on Curvature of the Spine**.—Works on the spine are multiplying beyond all former precedent, though we are not of opinion that our knowledge of the treatment is increasing in proportion to the authors. In our last Number we analysed and

* An Enquiry into the Causes of the Curvature of Spine, with Suggestions as to the best means of preventing, or, when formed, of removing Lateral Curvature. By J. Jarrold, M.D.—pp. 147. London, Longman and Co.

remarked very freely on Mr. Shaw's work. In the present Number, we intended to have given an account of the work of Dr. Dods, but as we have been disappointed in receiving the article sufficiently early for the press, it must stand over with that of Dr. Jarrold till next quarter.

Mr. Charles Bell, *on Injuries of the Spine and the Thigh Bone**.—This is another controversial work, as the title bears, on some of the subjects disputed so warmly between Mr. Earle and Sir A. Cooper. Mr. Bell is strongly opposed to amputation at the hip-joint, and to applying the trephine in cases of spinal injury, and as his opinions on this subject are well known, he complains that he has been attacked by Sir Astley in his lectures with abusive epithets. The evidence of this is taken from the reports of Sir Astley's lectures in *The Lancet*, by which it pretty strongly appears he insinuated that Mr. Charles Bell is "a blockhead," and ought to be ranked among "foolish persons." Mr. Bell has some right to call on Sir Astley to disavow the allusion, as the reports of the lectures in *The Lancet* are acknowledged by all (whatever may be their opinion of the work in general) to be given with considerable ability. Mr. Bell's strongest case, however, is the reclaiming for his late distinguished brother, the doctrine of non-union of fractured bones under certain circumstances, and other surgical opinions and directions, which Mr. C. Bell alleges are now taught by Sir Astley as his own discoveries, and the further to conceal this, that he seldom or ever alludes to the works of Mr. John Bell, except with the intention of undervaluing them.

These charges are, we must confess, very strong; but as we have no interest further than the love of truth for either party, we must leave the refutation to Sir Astley himself or to his friends. We think he cannot in honour avoid, at least, giving an explanation.

M. Maingault's *Treatise on Amputations*†.—This is a very complete and minute account of every thing requisite for amputation wherever it may be performed. The author gives tables of the necessary apparatus; rules to be observed in the operation, with plates, on a large scale, of the parts to be operated upon.

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* Observations on Injuries of the Spine and of the Thigh Bone; in two Lectures delivered in the school of Great Windmill Street. The first a vindication of the author's opinions against the remarks of Sir Astley Cooper, Bart. The second on the late Mr. John Bell's title to certain doctrines now advanced by the same gentleman. By Charles Bell, Surgeon to the Middlesex Hospital. 4to.—1824.

† Medecine Operatoire. Traité des diverses Amputations, &c. Par M. Maingault, folio. Paris.

The report of the Institute speaks very highly of the work, which is to be completed in two additional parts.

Case of Inguinal Hernia, with Constriction of the Gut. By Dr. GUNTHER of Cologne*.

"A middle aged labouring man, had had an inguinal hernia on the right side for a considerable length of time, which, not being retained by a suitable bandage, protruded, and became strangulated. The strangulation was relieved by the taxis, but vomiting and constipation remained. They however gradually diminished so far, that the vomiting became less frequent, and a small, rather firm motion occurred every eight or ten days; his condition in general improved so much that he could follow his business in some degree, and his appetite returned. He continued in the same condition for two years, when the hernia again protruded, and became strangulated with the usual symptoms. The surgeon who had often before attended him, reduced the hernia by the taxis, but the symptoms continuing unabated, I was called in, and on examination, found the abdominal ring pervious, the belly tense, but not particularly painful. I ordered Magnes. Sulph. c. Tra. Theb. and the injection of tobacco-smoke, but without success. In two days, a little discharge took place from the bowels, but the rest remained as before. As I suspected that a partial strangulation still remained, and as the patient refused to submit to the operation, I gave him Ol. Ricini c. Tra. Theb. and clysters of tobacco decoction with vinegar; put him in the warm bath, &c., but all in vain. On the fifth day of my attendance, and the seventh from the appearance of the symptoms, the patient died. On examining the body we found that there was not any strangulation, and that the viscera of the abdomen generally were in a healthy state; but in the small intestine we found a portion, about an inch and a half long, constricted and nearly altogether obliterated, presenting also the appearance of commencing gangrene. This state of disease probably originated in the constriction caused by the inguinal ring, during the long time that the intestine had remained fixed there at a former period."

M. GRAEFE'S *Case of Lithotomy* †.—The operation was undertaken under very unfavourable circumstances in a countryman aged 38, who had suffered from calculous symptoms nearly thirty-five years, and was almost exhausted by pain and misery. That the stone was large could easily be seen beforehand, but after the bladder was opened its size was found to exceed all expectation. So great was it that the forceps, however carefully applied, slipped off, or sunk into the concretion, or even bent at the handles; but all in vain. Professor Graefe at last succeeded in extracting it, by introducing three lithotomy scoops into the

* Graefe and Walther's Journal, 4ter. B. 2ters. Heft.

† From the Extract from the History of the Chirurgico-Ophthalmic Hospital of Berlin, for the year 1822. (Graefe und Walther's Journal, 4ter. B. 4tes. H.)

bladder, and using them (with the aid of an assistant) as levers. Immediately after its extraction, the stone weighed twenty-one ounces and nearly four drams. Its length was four inches, three lines; its breadth three inches, nine lines; its thickness two inches, ten lines; its longest circumference eleven inches, nine lines; its shortest nine inches, ten lines—all Paris measure. The patient was at first much relieved, but unfavourable symptoms soon appeared, and he died on the 13th day. The section shewed that the wound in the bladder had contracted to the size of two inches; that the bladder had not been lacerated, and that it was not even inflamed. From the immense size of the stone which had completely filled the bladder, and therefore constantly obstructed the passage of urine, the ureters were dilated as high up as the kidneys, into large bags which had contained the urine.

M. Graefe's *Case of Ligature of the Innominata**.—This operation was undertaken for the relief of an aneurism of the brachio-cephalic trunk, attended with excessive pain and suffering, and increasing in such a manner as to render death inevitable. The mode of operation is not minutely described, but Dr. Graefe says, that after making an incision in the neck, he pushed the cellular substance aside, so as to get behind the sternum, and by means of a blunt hook, passed the ligature round the vessel, (which was about as thick as a finger,) one inch from the arch of the aorta, and about two from the heart. The operation was completed in a few minutes, and though performed in the midst of some of the largest vessels in the body, no more blood was lost than that which stained the fingers and instruments. Immediately on tightening the ligature, the pulse ceased in the arteries of the right arm, in the right carotid and temporal arteries. At the same time the throbbing in the aneurism stopped, and it became flaccid. The patient felt himself much relieved, and not the slightest disturbance of any function took place, as might have been expected from an operation which intercepted so large a portion of the current of blood issuing from the heart. Under the most simple treatment the patient was so much relieved from all his sufferings, and so perfectly well, that not any of the many experienced professors who examined him doubted the high probability of his recovery. Several weeks after the operation, when the incision was almost wholly healed, bleeding took place at different intervals, rendering recovery doubtful. Having ceased, hopes were again enter-

* From C. F. Graefe's Report of the Chirurgico Ophthalmic Hospital of Berlin' for 1822.

tained, until the symptoms again made their appearance, and in the end the patient died on the 67th day, consequently more than two months after the operation. Hurt as he felt by the loss of a patient who had happily got over so many dangers, Dr. Graefe regrets that he did not undertake the operation at an earlier period, and that he postponed it to the employment of other measures usual in such cases. Dissection shewed that the cure was nearly completed by deposition, within the aneurismal sac. The arteria anonyma was closed below the point of ligature by means of a thrombus. The brain and right arm were supplied with blood by anastomosing vessels. In spite of the unfortunate want of success which has hitherto attended this operation, Dr. Graefe expresses his conviction of its propriety, and ultimately favourable result. The description of the operation, the detail of symptoms, and the account of the preparation of the parts made after dissection, are more fully treated of in the work from which this account is extracted.

Ligature of the external Iliac Artery, by Dr. Arendt, of St. Petersburgh.—This case bears ample testimony to the advancement of operative surgery in Russia. In the first he tied the external iliac artery, in a strong man aged 44, two inches from its origin, for the cure of a femoral aneurism, as large as a child's head, including a third of the thigh, extending five inches above Poupart's ligament, appearances of an approaching rupture of the sac having already shewn themselves. He made an incision in the integuments seven inches in length, and nearly parellel with the crista of the ilium. He found some difficulty in passing the ligature from the depth of the wound, and the firm connection of the artery to the neighbouring parts. A slight pulsation returned in the swelling a few hours after the operation, and on the day following became so considerable that Dr. Arendt thought it proper to compress the artery, which he effected by passing the ends of the ligature through a piece of cork, and then through a silver tube to the extremity of which they were fastened; the pulsation ceased directly.—On the second and third day, however, it again returned slightly, superficial gangrene of the most prominent part of the tumour occurred, and on the 14th day Dr. Arendt made an opening into it, to permit the escape of its contents; from that period the case proceeded uninterruptedly to a favourable termination.—We may remark, that Dr. Arendt does not appear to have been aware that after the operation for aneurism, pulsation occasionally returns in the sac by means of the anastomosing branches opening into it, or immediately below it, or between it and the point at which the ligature is applied.—It is seldom, however,

or perhaps never, sufficiently forcible to justify any apprehension of the return of the disease. For the same reasons we are much inclined to question the efficacy of the compression afterwards applied.

Case of Ligature of the Carotid Artery, by Dr. Arendt.—We shall give this case principally in Dr. Arendt's own words.

"November 18th, 1821, at 3, *p.m.* John Konowaloff was brought to the Artillery Hospital. There was an immense swelling on the right side of the head, extending from the temple and middle of the forehead, to two inches below the lower jaw, and covering the whole of the right ear; the eye of the same side was likewise hid, and the lids much swollen and distended. The tumour pulsated forcibly, and presented many livid fissures which threatened a speedy rupture.

"Excepting a feeling of weight and pressure the patient did not experience any other inconvenience. He stated, that he had from childhood had a nævus over the right eye; that it increased to the size of a goose-egg, and by its weight had closed the eyelid, (other nævi existed on the other parts of the body.) About an hour before his admission, the swelling had at once increased to its present size, in consequence of a blow from one of his comrades. (Dr. Arendt, being absent, did not see the patient until two hours after his arrival at the hospital; and considering that the swelling threatened rupture and inevitable death, resolved on tying the carotid artery, and did so at six, *p.m.* by candle-light, in the presence of Drs. Heirott, Witte, and others.) He proceeds to say—the patient being laid horizontally on a table, with his head turned to the left side, I made an incision two inches and a half long, ending within an inch of the sternal extremity of the clavicle, running parallel with the inner edge of the sterno-mastoid muscle, and dividing the integuments and platysma myoides. The sterno-mastoid, and sterno-hyoid muscles being separated, the omohyoideus presented itself at the upper angle of the wound, and then the great vessels inclosed in their sheath. I did not perceive the alternate motion of the jugular vein mentioned by Cooper, Hodgson, and others.—I next attempted to pass the aneurism needle round the artery, so as to include it alone in the ligature, leaving out the jugular vein, nervus vagus, and descendens noni. (Dr. Arendt, has neglected to state in what manner he opened the sheath.) Before, however, I could effect this, the aneurism suddenly burst; the blood poured out; the patient was seized with vomiting, convulsion, and cold sweat. This alarming occurrence did not deter me from completing the operation; my assistants Tarassoff, Tallquise and Smelsky, attempted to moderate the flow of blood by pressure with sponges; the quantity lost was estimated at three pounds. I placed two broad ligatures, each of six waxed threads, around the carotid; tightened first the upper and then the lower, leaving a space of half an inch between without dividing it. Immediately after the ligature, the bleeding

ceased, the alarming symptoms vanished, and the patient became tranquil. The wound was closed, the head bent forward so as to relax the artery, and an opiate given.—On the 19th I opened the tumour and took away a large quantity of coagulated blood, together with some portions of the integuments and spongy substance, and having tied about twelve small arteries, dressed the wound with equal parts of alum, kino, and gum arabic. Here again the patient lost much blood; in the two days about eight pounds; he was consequently much debilitated.

"On the 20th, the principal symptoms were a painful feeling in the trachea, swelling of the right side of the face, headache, thirst, and heat of skin. On the 21st, 22d, 23d, and 24th, the symptoms generally improved, except the pain in the trachea, which was attended with cough, resisted all the remedies employed, and put on the appearance of tracheitis. It was relieved by the application of eight leeches.

"On the 5th of December the ligatures came away. He continued to improve until the 12th January, 1822. The cough was then inconsiderable; the wound on the head was completely healed; that in the neck merely a little fistula. On that day, without any other evident cause than a violent fit of coughing, an arterial hemorrhage took place from the fistula in the neck, the blood pouring out in a strong jet. Eight ounces were lost in about two minutes, and then it suddenly stopped. Perfect rest and acid drink were prescribed. At nearly the same time on the following day another bleeding, to the same amount took place, and ceased of itself: to discover its origin, I dilated the wound, and washed it with warm water, but in vain, as no bleeding appeared.—January 14th, about the same time of day, another hemorrhage, by which the patient lost nearly a pound of blood. On the 15th, after a fit of coughing, again a bleeding of five ounces: the patient much debilitated and agitated. On the 16th and 17th, not any. On the 18th and 19th it again appeared, and though but slight, so much exhausted the strength of the patient that both he and I despaired of his recovery. Fortunately it never again returned, and under the employment of suitable means, the wound closed, and the patient left the hospital on the 10th of April in perfect health."

Dr. Arendt professes himself totally unable to explain the cause of this singular periodical hemorrhage, particularly at such a length of time after the separation of the ligatures.

As regards the first case, he remarks, that though the external iliac has been frequently tied, it has been for the most part in the lower portion of its course, and that so far as his information extends, this is the first instance in which a ligature has been placed so near to its origin.—*(Graefe und Walther's Journal.* 4ter B. 1stes H.

M. Willaume's *Case of Varicose Aneurism**.

"On the 5th February 1821, as Aug. Berthier was fencing with one of his comrades in the artillery, in a sudden pass, he received a wound from his antagonist, the foil passing through his stock, and penetrating the lower and right side of the neck. A large quantity of blood immediatcly poured out, and according to the patient's statement, in an unbroken stream as in venesection. His comrades were frightened, bound up the wound with two handkerchiefs, and carried him home. The regimental surgeon was called, and found a large swelling, a true thrombus, in the situation of the wound; the hemorrhage had ceased, and the patient was not faint. On the following morning, he was brought to the Military Hospital. I found a small longitudinal wound a little above the clavicle, and at a short distance from the sterno-mastoid muscle, and from the external jugular vein. The swelling, which was still considerable, though smaller than the day before, pulsated, and presented a peculiar obscure rustling which extended along the whole side of the neck as far as the ear. Venesection was performed to the extent of twelve ounces, and repeated in the evening. The patient had long been affected with pulmonary catarrh and a violent cough arising from it, caused much anxiety, as from the direction of the wound and comparative trials on the dead body, I was inclined to believe that the carotid was wounded. I resolved, however, if necessary, to undertake any thing rather than permit the patient to perish without assistance. On the following day, though the cough was violent, no bleeding appeared. This circumstance, the gradual diminution of the swelling, and the audible rustling sound, induced the belief that the internal jugular vein and the carotid artery had been opened at the same time, and that a communication now existed between them. The superficial veins of the neck and face on the wounded side were more prominent than in a healthy state. Professor Willaume attributes this partly to the transfusion of arterial blood, and partly to the cough. The veins did not pulsate, and the colour of the face was unchanged. As the tumour diminished in size the rustling became more concentrated, and could no longer be heard in the same extent as before. Examined with the stethoscope, it gave the same sound as a smith's bellows when expelling a portion of air. When lying on the right side, the patient heard the sound himself, but not so forcibly. The swelling diminished to the size of a small nut, and lay deep, but was thrust out by every fit of coughing. The rustling was confined to the swelling, the little wound healed, and the ecchymosis all gone."

From the depth of the swelling and the rustling sound in the situation of the wound, Professor Willaume concludes that the communication between the artery and vein was not immediate, but that a little tube or channel existed between the two

* Journ. Comp. du Dict. des Sci. Med. Nov. 1821.

vessels, formed by the thickness of the cellular substance, and affording a passage for the blood from one into the other in the manner originally described by Dr. W. Hunter.

Mr. Key on Lithotomy *.—Mr. Key is of opinion that the principles of Cheselden, for the operation of lithotomy, have latterly been either misunderstood, neglected, or, in consequence of improper instruments, not acted up to. It is with the view of bringing surgeons back to Cheselden's principles that this work has been published, and to prevent the attempts at present making to revive a mode of operating, "that presents no advantage, and needs an equal test of time and experience to shew its comparative merit" with that of Cheselden. We must say that we are not much in favour of such principles of reasoning, which would go to prevent all improvement, but we shall examine Mr. Key's work more at length, and give him an opportunity of showing the superiority of this method in his own words.

M. Dupuytren's *New Mode of Operating in Lithotomy.*—We give this as a contrast to Mr. Key's plan of keeping surgery stationary by adhering to the old methods.

M. Dupuytren has just performed the operation for stone in a new mode, and with the aid of a new instrument. The operation may be called the transverse operation *(taille tranverselle)*, and the instrument, the double *lithotome caché*, which consists of two blades, arranged so as to cut at the same time, both right and left, in withdrawing the instrument from the bladder. The catheter is introduced, and the membranous portion of the urethra cut, to allow the introduction of the *lithotome* into the bladder. On withdrawing the instrument, it is opened, by which means it divides the prostate on each side into halves, the one anterior, and the other posterior. By this method, the vasa deferentia, rectum, transverse arteries of the perineum, and the pudic artery is avoided in the operation. M. Dupuytren operated a few days ago on a child; since which no bad symptom whatever has appeared.

Dr. Mott's *Cases of Extirpation of the Lower Jaw* †.—"A married lady, about 22 years of age, was affected with osteo sarcoma of the left side of the lower jaw. A year had elapsed since its first appearance, it had reached the size of a hen's egg, and extended itself from the angle of the jaw to the first bicuspid tooth. On the 30th March, Dr. Mott removed the diseased parts in the fol-

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* A short Treatise on the Section of the Prostate Gland in Lithotomy, with an explanation of a safe and easy method of conducting the Operation, on the principles of Cheselden. By C. A. Key, Surgeon to Guy's Hospital. 4to with plates. London, 1824.

† American Medical Recorder, January, 1822.

lowing manner, having previously tied the left carotid—he extracted the first bicuspid tooth, made a semilunar incision through the integuments, from the lobe of the ear to the chin, separated the soft parts, and sawed the bone through, a little below its division into the coronoid and condyloid processes, and again at the point where he had extracted the tooth. The ligature on the carotid came away on the 13th day, the wound united for the most part by the first intention, and the patient returned home perfectly cured, on the 37th day.

"Another case happened in a young man aged 18. The disease had existed eight years, and had reached an enormous size. It had begun at the last molar tooth of the right side, and had extended to the first bicuspid of the opposite side, including the whole of the mouth. On the 15th May, Dr. Mott tied the right carotid, and extirpated the diseased mass, by sawing through the jaw at the second bicuspid tooth of the left side, and by removing the right condyloid process from the articular cavity. The tumour weighed 22 ounces, and its circumference equalled that of the head of a full-sized fœtus. The case proceeded favourably until the evening of the fourth day, when the patient died; the wound had been dressed in the morning, when almost two thirds of it were found united. (?!) On examining the body, the lungs were found highly inflamed: the anterior mediastinum contained a large quantity of yellow lymph, almost of the consistence of pus; there was a pint of yellow serum in the pericardium, and the pleura was exceedingly thickened. Hence, (says the American Editor) it is clear that the patient died of a pulmonary affection totally unconnected with the operation which had been performed. (?)"

It is but just to our trans-Atlantic brethren, to state, that not having an opportunity of seeing the original Journal, the above cases have been taken from the Journal of Graefe and Walther, (4ter. B. 3es. H.) in which we may be allowed to suppose, that some very interesting and important details of the operative process, progress of symptoms, &c. may have been omitted; omissions for which we are otherwise quite at a loss to account. The notes of interrogation and admiration belong to the German professors, and certainly appear to be justified by the circumstances.

A very interesting case of the same kind operated upon by Dr. Mott is detailed at length by Mr. Pattison, in his Appendix to Burns's work on the head and neck, which we shall probably give at a future opportunity.

VI. PRACTICE OF PHYSIC.

*Physiological Medicine**.—This is a very clever treatise in form of a dialogue, half popular and half professional, giving an exposition of the system of Broussais. It commences by a young physician telling his friend, a Savant, how narrowly he had escaped killing his father, by pursuing the old method of treatment, and how this patient was completely restored by the method of Broussais.—The work is very well calculated, we think, to raise the fame of the school of Val de Grace. We cannot recommend a more lively introduction to the Broussaian system, which is spreading fast on the Continent, and has many partizans among the young men in this country, who have studied under the venerable professor.

Wade's *Observations on Fever*†.—Many of the remarks of the author cannot be too strongly pressed upon the notice of the young practitioner.—We do not remark any thing novel or peculiar in Mr. Wade's book, though his views appear to be clear and judicious, and the student, for whom chiefly it is intended, will learn much in a small compass.

Dr. Crane *on Cubebs in Chronic Rheumatism.*—

"These diseases, in most instances, may be considered as incurable, and the unfortunate sufferer is doomed to lead a life of pain and uneasiness, which embitters his hours by day, and deprives him of rest by night. Fearfully he views each passing cloud, and, sensible to the change of weather, he becomes a living barometer. Happy, indeed, would it be, and great would be the joy of thousands, if a plan of cure could be discovered for those who are afflicted with chronic rheumatism. This consideration encourages me to hope, that I may be permitted to state the effects of a remedy, which has at least in a few instances proved beneficial. Accident led me to the employment of cubebs in chronic rheumatism; and in several cases it has afforded great relief, although in others it has produced no effect whatever.

"The cubebs were prescribed for a gentleman, in consequence of having contracted a gonorrhœa, who had for several years previously been afflicted with chronic rheumatism. He observed to me, that whilst taking this remedy, his rheumatic pains were also much alleviated. After the disappearance of the gonorrhœa, I advised him to continue taking the cubebs in drachm doses twice a-day for several weeks. In the course of two months, he found that he was nearly free from pain, and that he could move his legs and

* Le Catechisme de la Medecine Physiologique, 8vo. Paris, 1824.

† Observations on Fever. By R. Wade, M.R.C. and Apothecary to the Westminster General Dispensary—London, 1824.

arms with greater ease. During the following winter, he was much less troubled with his rheumatic pains than he had been during the last four or five years; and whenever he feels any return of his complaint, he takes the cubebs for a few weeks."

"A young woman, about twenty years of age, who had been under my care two months, on account of the pain she suffered from chronic rheumatism, deriving no relief from the remedies employed, I determined to prescribe for her the cubebs. She took them in half drachm doses three times a day. On the third day, she said her pain was much less severe; and in six weeks, she was completely free from her complaint, and able to return to her service.

"In some cases of chronic rheumatism, I found the cubebs to be apparently useless. The cause of this failure of success might, perhaps, in some of the cases, be accounted for, not from any fault in the medicine, but from a want of perseverance in the regular use of it; as we often find, that when a remedy is to be taken for several weeks, it is taken irregularly and even omitted for a day or two without the medical attendant being informed of such an omission; and then upon the remedy falls that blame which is due only to the patient and his friends. This is not unfrequently the case amongst the lower classes of patients, who have little faith in any medicine which does not act both effectually and speedily, and who are very apt to tell their medical attendant they are regularly taking the remedy which he has prescribed for them, when the truth is they are not doing so."

Mr. Plumbe *on Diseases of the Skin**.—The author of this work, (which, to the credit of the publishers, is handsomely got up) is favourably known to the profession by his Treatise on Porrigo, in which he advocates local treatment as being more effectual than constitutional remedies. He carries the same doctrine, we perceive, through his chapters on Acne, &c. Although we cannot wholly agree with Mr. Plumbe in these opinions, which are not only at variance with our own experience, but with that of the profession in general; yet we think, that Mr. Plumbe's local measures, in conjunction with the constitutional treatment usually adopted will add powerfully to our resources. Mr. Plumbe has very properly discarded many of the uselessly minute subdivisions of Willan and Bateman, though his arrangement is substantially the same with theirs. The analysis of this important work will be prepared for an early Number.

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* A Practical Treatise on Diseases of the Skin, comprehending an account of such facts as have been recorded on these subjects, with original observations. The whole arranged with a view to illustrate the constitutional causes of these diseases, as well as their local characters. By Samuel Plumbe, M.R.C. &c. 8vo. pp. 392, two finely coloured plates. London, Underwood, 1824.

Dr. Crampton *on Tinea* *.—This is a very interesting paper, by a distinguished physician in the sister kingdom, and is the result of treating twenty-eight cases of tinea in Whitworth hospital. Dr. Crampton tried various methods of treatment, both local and constitutional. The species were the tinea favosa, crustacea, granulata, furfuracea, and asbestina, and the porrigo scutelata, and decalvans. The absence of pediculi, in all the cases, a very uncommon occurrence, Dr. Crampton refers to the shortness of the hair which was kept closely cut.

"The treatment which I finally adopted was, first to use poultices, giving cathartics every second morning, and the warm bath every third evening; during the time the poultices were discontinued, the liniment with lime-water and oil was applied. When the common oatmeal poultice was not sufficiently strong to remove the crust, one was constructed with soap reduced to a stiff jelly; the common soft brown soap answered best. The soap poultice was productive of rapid amendment; it very quickly dissolved and removed all hardened, lymphy, and other morbid secretions. Ultimately the lime-water liniment seemed to keep the teguments of the head soft, to prove healing, and to encourage the growth of hair. Mr. Plumbe advocates the expediency of extracting the hairs with a forceps where suppuration has taken place about their roots; he considers it quite impracticable to succeed without this step. This in any of the twenty-eight cases under my care, appeared unnecessary; the poultices removed all collections of matter, whether superficial or deep seated, and allowed the cranial teguments to regain their healthy condition."

All the twenty-eight cases were cured except two of porrigo decalvans, some sooner, some later, but all within six months.

Banyer's *Ointment for Tinea* †.—The following formula is given by Mr. Sprague for this obstinate complaint.

℞. Submur. hydrarg. ʒij.
Aluminis exsiccat.
Plumbi subcarb. āā. ℥ss.
Terebinth. venet. ʒvj.
Cerat. cetacei. ℥iss.

Misce fiat unguentum.

M. Roche *on Tinea* ‡.—In a letter addressed to the Academie Royale de Medecine, M. Roche announces that he has cured, in the space of three months, a case of porrigo favosa, which had continued for nearly eleven years and had resisted all known means. The remedy used was chloruret of soda, assiduously applied in the form of lotion. We should like to know the age

* Dublin Transactions. Vol. IV.
† Medical Repository. ‡ Ibid.

of the patient, and the regimen, &c., followed during this cure.

M. Bally *on Morphine.*—The Revue Medicale, for Feb. 1824, contains some observations, extracted from a Memoir, by M. V. Bally, on the employment of acetate of morphine in several diseases. He has, for the most part, used morphine in combination with acetic acid, which renders it soluble without neutralizing its active properties. He prescribed it in the form of pill, because of the greater certainty in dividing doses, and the greater degree of purity in which it is preserved. He commenced, sometimes, with $\frac{1}{8}$th, but generally with $\frac{1}{4}$ grain night and morning: this dose rarely produced powerful effects, and it was found necessary to increase the quantity as the sensibility to its action diminished. When the doses are already large, it is remarkable that they may be increased more rapidly, and in a higher ratio. Small graduated doses do not produce any effect on the mouth, pharynx, and œsophagus, although their action on the brain and stomach is powerful. When the quantity has reached the amount of six or seven grains given at two doses in twenty-four hours, nausea generally appears, with, occasionally, pains at the epigastrium. Two cases are noticed, in which smaller quantities produced symptoms of slight gastritis. When such appear the dose should be diminished, or the medicine be for a time discontinued. On resuming it, considerable varieties present themselves; some patients being more susceptible, and others less so, to its effects. The same variety exists in its operation in the intestinal canal; constipation is a common symptom, but is often succeeded by diarrhœa, which ceases with the cessation of medicine. M. Bally has convinced himself of the vermifuge properties of the acetate in several instances: when not administered with any such intention it has caused, in many patients, the expulsion of lumbricoid ascarides, by vomiting or by stool. He has observed that it (the acetate) does not act directly on the kidneys, in which the patients do not feel either pain or weight. He is also inclined to think that the frequent micturition succeeding its use, is caused rather by irritation of the bladder and its neck, than by increase of secretion. He states, that 19-20ths of the males to whom it is administered experienced difficulty in making water, and often retention so complete as to require the use of a catheter. Frequently the patients strain for several minutes, the water suddenly flows, then as suddenly stops, alternately in this way until the bladder is emptied. He considers that these symptoms may be produced by paralysis of the body of the bladder, contraction of its neck, or tumefaction of the prostate. He has not observed any

thing similar in females, and asks, is this to be attributed to the shortness of the urethra, to the absence of the prostate, or to what? The dose capable of producing these effects differs considerably, in some cases $\frac{3}{4}$ of a grain, in others not even five grains.

It is generally admitted that opium augments the force of the circulation; M. Bally's observations tend to prove that the acetate of morphine has not the same effect. In several cases it diminished the force and hardness of the pulse. If during its employment the pulse should become hard and frequent, the symptom depends on the occurrence of inflammation of the stomach or some other organ. It has not in any case tended to excite the appearance of hemorrhoids or the menstrual flux. It does not produce any injurious effect on the pulmonary system; neither cough nor hæmoptysis. In general it may be said to lower rather than increase the circulation through the gastric and thoracic systems. Neither does it produce sweating or any increase of animal heat. It causes, however, an uncomfortable pruritus, more common in females than in males, and sometimes attended with an eruption of small conical pimples. Its principal action is upon the encephalon, determining either serious irritation there, or congestion, or hemorrhage. If, says M. Bally, by the term narcotism, we are to understand stupor, the acetate of morphine has not any claim to be called a narcotic: the case is otherwise, if, as commonly happens, the term narcotism be meant to include the symptoms of an excited state of the brain, as vertigo, dimness of sight, tinnitus aurium, &c. A dose of less than $\frac{1}{4}$ grain does not cause any marked affection of the brain, except in very irritable subjects. But above this dose, vertigo, &c., appear on the second or third day, often within a quarter of an hour of taking the dose, and in a degree proportioned to its quantity. Larger doses produce other effects, but of the same nature. One man with aneurism of the heart, was in a state of *coma vigilium* apparently in a state of profound stupor, he heard and saw every thing going on about him, others thought they saw every thing about them whirling round, and staggered as though intoxicated: the vertigo was more considerable in the vertical than the horizontal posture; in the latter, subsultus and convulsive motions of the head backwards, were more common. In the midst of all these symptoms, however, M. Bally remarked that delirium and affection of the mental faculties never succeeded the use of the acetate, even in large doses, except when they happened to be connected with the patient's disease. The energy of muscular motion is diminished by its use, as a consequence of its action on the brain, but however long continued,

it never causes muscular tremblings. One of its most usual effects is, diminution of the power of vision, in so much that several patients were unable to read. Lastly, the greater number of the phenomena succeeding to its administration, were more strongly marked in the spring than in any other season.

The Editors of the Revue Medicale have added some experiments made by M. Chevalier on himself, (in a state of health,) with the acetate of morphine, and differing somewhat in their results from the observations of M. Bally. The following are the conclusions deducible from them.—1. That it (the acetate) produced irrritation of the throat, thirst, and redness of the tongue. 2. That it caused a certain degree of inconvenience in respiration, and even some painful feelings in the chest. 3. That it had always the effect of rendering the pulse strong and quick. 4. Other phenomena presented themselves corresponding with those observed by M. Bally, such as various cerebral symptoms, pruritus, eruptions, &c.

It deserves to be noticed that at the veterinary school of Alfort, M. Barthelemy has given the acetate of morphine to horses, by the drachm, without any sensible effect, and that at Paris, M. Segalas, gave very large doses to dogs, without fatal consequences.

M. Brera *on Iodine.*—Omodei's Annali di Medicina, for June, 1823, contain some clinical observations on the employment of Iodine, made by professor Brera, in the medical hospital of Padua. Its principal effects are stated in the following conclusions, with reference to individual cases.

Iodine, and its different preparations were found useful. 1. In dissipating congestion of the mesenteric glands, connected with symptoms of tabes. 2. In reproducing menstruation, when its cessation had produced, in one case hæmoptysis, with pituito-purulent expectoration; in another hepatalgia; in another hemorrhage from the internal angle of one of the eyes; and in a fourth dysenteric flux with appearances of hysteria. 3. In producing plethora of the uterus to the relief of other parts in which a similar state existed. 4. In inducing the same salutary change in the strong as well as in the weak, in the chlorotic and cachectic, whom preparations of steel had failed to relieve. 5. In overcoming a disposition to scrofulous phthisis. 6. In removing glandular indurations and congestions, whether their origin was scrofulo-syphilitic, or simply inveterate syphilitic, or rachitico-scrofulous; and also scrofulous ophthalmy, as the sequel of measles. If otherwise indicated, these observations prove that iodine may be prescribed with success, even in those troubled with copious pituito-purulent expectoration; in sub-

jects decidedly phthisical; in those affected with occasional palpitation of the heart; in the strong as well as the weak.

"It is contra indicated in cases of inflammatory predisposition, in true inflammation, in active hemorrhage, in nervous erethism, during the existence of saburral and bilious collections, pregnancy, slow fever, and marasmus. Its salutary effects are announced by increase of appetite, and unwonted energy of the pulse; these symptoms shew that its action has commenced, and it is then prudent to watch the time at which the system becomes saturated, and to mark the limit between the medicinal and the pernicious effects of the substance. That the system is fully saturated, is known by the increased quickness and frequency of the pulse, by a slightly hot and painful state of the fauces, by pain in the orbits or eyes with dullness of vision, pain and swelling of the gums, headache, restlessness and loss of sleep, pain and swelling of the affected organs, as the uterus in amenorrhœa, thyroid gland in bronchocele, &c., voracious appetite, sometimes swelling of the submaxillary glands, and mammæ, with diminution of their bulk. On the appearance of such symptoms, the iodine should be suspended; or even if they are absent and the doses be too large, or too rapidly increased, violent catharsis may suddenly appear, and make rapid and unmanageable progress. If the effects of the medicine are farther continued, emaciation succeeds the other symptoms, and in a few days becomes extreme, accompanied at the same time with severe pains in the eyes and orbits, dimness of sight, pains in the parts, for the relief of which the medicine was employed, neuralgic affections of the chest and stomach, palpitation of the heart, tremors, convulsions, anorexia. Lastly, this condition may be relieved by general or local bleeding, as may be required, by the use of the tepid bath often repeated, by rest, diet, emollients, and diluents. Prussic acid and its combinations are serviceable in relieving the palpitations, tremors, and convulsions."

*Mental Alienation**.—We take the following from the Anthropological Journal, of Nasse, which seems to be carried on with considerable spirit.

Case 1.—A man, aged 32, and who excelled in musical talents, became melancholy, and was in consequence confined in the hospital, at Pforzheim. His bowels acted very slowly. At one time he had constipation for 15 days, in spite of every medicine which could be devised, so that it was feared his life was in danger. In these circumstances, Dr. Groos, ordered a *douche* upon the abdomen, and it proved completely successful. By degrees, however, the patient fell into imbecility. He was then ordered frictions along the spine, Peruvian balsam dissolved in sulphuric ether. By this means his thy was removed, and he again recovered his taste for music."

Case 2.—"A woman, aged 23, of a delicate and nervous constitution, was affected with mania lactea, from the beginning of May,

* Zeitschrift für die Anthropologie. Von Nasse, Leipzig.

to the beginning of July. The paroxysms of fury, although interrupted only yielded to the treatment advised by Dr. Schneider. He had almost despaired of a cure, when he prescribed from 15 to 24 drops of the tincture of stramonium thrice a day, in a glass of water. The effect of this remedy was astonishing. In 15 days the patient was quite cured and suffered no relapse."

Case 3.—" A young woman, aged 22, who first became melancholy, and then furious, was treated by Dr. Hirsch of Bareuth. After exhausting all the known remedies stimulant and debilitating without effect, he ordered the hair to be shaved, and the head to be covered with a cataplasm of unctuous earth. The cataplasm, however, was not at first applied, in consequence of a very copious perspiration, supervening on the head, and continuing for three days. During this time the patient became quite calm, and by degrees regained her usual strength and her spirits. As the hair grew again, the perspiration ceased, and the patient experienced formication on the head, with much mental anguish. The hair was again shaved, and with the same beneficial effects, and by thus shaving the head every month, the disease is kept completely under."

M. Leth's *Case of Constipation, cured by Cold Water* *.—

" A man servant, aged 22, was afflicted with continued colic, apparently about the umbilical region. The belly was swollen, and from its palpitation it could be perceived that it was distended by gas. The alvine evacuations were stopt, and the result was borborygmi, eructation, and frequent vomiting. During the first days, the food vomited was mixed with some mucous and bile, but it afterwards became fæcal. The attack had commenced with rigors succeeded by burning heat, thirst, and headache."

M. Leth imagined that there must be some intersusceptio, as there was no symptom of hernia, and had recourse to bloodletting, antispasmodics, purgatives, and embrocations, but with no effect. The abdomen became more and more disturbed, the pulse remained hard, and a clammy sweat drenched the hands.

" Compresses of a number of folds were now dipped in iced-water and applied over the abdomen, changing the cloths as soon as they became heated. The patient was also ordered to drink water as cold as it could be procured from the spring, and at the same time to take twelve drops of laudanum every two hours. It was on the eleventh day that this practice was begun, and it was almost immediately successful in relieving the pains, and a dose of castor oil was found sufficient to remove the accumulated fæcal matter from the intestinal canal."

Dr. Sanders, *on Tonic Treatment in Phthisis.*—A Dr. Sanders, who dates his letter from Edinburgh, has published in Dr. Johnson's Journal a sort of braggadocio claim to the honour

† Bibliothek for Lœger. Copenhagen.

of originating the tonic treatment in Phthisis, as adopted by the Rev. Dr. Stewart, of Erskine, and has, without the least cause or the least proof, considered our valuable correspondent, Dr. Hume, of Hamilton, a party to the crime of depriving him (Dr. Sanders) of his just deserts as a discoverer. As Dr. Hume's papers on the tonic treatment of Phthisis first appeared in this Journal, we deem it right to state, that it was in consequence of the Editor's request that Dr. Hume wrote those papers, and so far from his being a party with Dr. Stewart to deprive Dr. Sanders of his rights, we are not aware that Dr. Hume even knows Dr. Stewart, and we are almost certain that the papers were drawn up without any communication on the subject with Dr. Stewart. The claimant, Dr. Sanders, however, will find by consulting the history of medicine, that this mode of treatment is far from being as modern as his self-partiality induces him to fancy. One thing is certain, Dr. Stewart has obtained celebrity from the practice—we never heard of Dr. Sanders before.

VII. MIDWIFERY.

Influence of the Maternal Imagination on the Fœtus. By Mr. Toone, of Salisbury*. "I beg to be permitted to offer a few remarks upon the much disputed point of the influence of the imagination in pregnant women, and the effect of external impressions on the fœtus in utero.

"The extent to which many women, for interested purposes, and others from ignorance, are disposed to carry the idea of this susceptibility, is unwarrantable, and often truly mischievous; yet, on the other hand, it can scarcely be denied, that during pregnancy, the imagination does, in some cases, seem to exercise a very extraordinary influence upon the formation of the child, and that this is occasionally very materially affected by external impressions. Indeed, from circumstances which have occurred in my own practice, so strongly is this opinion entertained by me, that whenever the mother, during the period of gestation, has related any remarkable transaction which has been forcibly impressed upon her mind, or any accident of an extraordinary nature which has befallen her, I have seldom been mistaken in my expectation of some defect or malformation of the child. The following cases are selected to illustrate the foundation of this opinion:—

"Mrs. D., of B., when far advanced in her first pregnancy, was accidentally passing at the moment when a child fell under a waggon, the wheels of which went over it, fracturing both arms, both legs, and so severely injuring the trunk, as to cause its almost in-

* Medical Repository.

stant death. The little sufferer was taken up in her presence, with its mutilated limbs dangling uselessly from it. She was most violently affected by the accident; and, after some time, was delivered of a daughter, whose limbs were at the moment of birth, and have subsequently (after a lapse of twenty-five years) continued to be, in a state of laxity and perfect uselessness, precisely similar in appearance to that of the injured child.

Mrs. B., of Fisherton, was alarmed during her pregnancy, by going to answer a knock at her door, from one of the Italian itinerant showmen, who thrust the hind part of a racoon nearly in her face. On delivery, her child had extensive spina bifida, with peculiarly emaciated buttocks and lower extremities.

Mrs. N., of Catherine Street, was standing at her door, during the passing of an election cavalcade, when a girl of the town, with a most terrific harelip, thrust her face nearly into contact with that of this lady, who fainted from the shock. Some months afterwards, she was delivered of a remarkably fine and well-formed child, with the exception of a deep harelip.

Mrs. C., of Endless Street, returning home one evening, in about the seventh month of her pregnancy, missed the bridge before her door, and fell into the water: the inconvenience which she felt from the fall was slight. On delivery, the ossification of the parietes of the cranium was so imperfect, that a congeries of small detached portions, like lentils, was alone perceptible. The head and neck of the left thigh-bone were also separated from its shaft, in the centre of which another fracture was discovered. It is worthy of remark, that the father of this child was born in precisely the same state, as to the thigh, which has been subsequently frequently fractured anew.

I leave these facts for consideration. The first case is authenticated by an intimate acquaintance with the family in which it occurred, and the rest came immediately under my own notice in the whole of their progress."

VIII. MEDICAL JURISPRUDENCE.

Dr. Dohlhoff *on Professional Ethics.*—A paper by Dr. Dohlhoff, in Graefe and Walther's Journal, (vol. iv. part iv.) gives us an opportunity of noticing a subject which has often fixed our attention.—He prefaces some cases of no particular importance, which he witnessed at the hospital of the Royal guard, in Paris, by a comparison of Baron Larrey's treatment of foreigners, with that of other professors in the French capital. This comparison, and we believe it is correct, is much in the Baron's favour. We will venture to say, that the treatment of foreigners in general by those in office, at the greater number of the Parisian hospitals, presents a striking contrast to any thing

witnessed in any other part of Europe. Familiarity with strangers, would of course be neither desirable nor proper in those holding official situations; but what injury could result from the exercise of the conventional civility due from one man to another, we are at a loss to understand.—We are aware that some individuals, who reflect disgrace alike on their country and profession, have by their imprudence and misconduct, in some degree, afforded a justification of the system of suspicion and incivility adopted in Paris: but we think the distinction so easily made, that we cannot admit the validity of the excuse. That notwithstanding our proverbial hauteur and repulsiveness, this odious reproach cannot be attached to us, is one among the many circumstances relating to the profession in Britain, which affords us unmixed satisfaction.—Also, that many individuals in Paris, deserve to be excepted from the general censure, we cordially admit; but they are only individuals, and the charge against those in public situations remains in full force. In fact, it cannot escape the notice of a common observer, that a comparative want of politeness among the French, generally, is not the least of the moral evils which the revolution produced, and has left behind it.

IX. MATERIA MEDICA.

The revised edition of the Pharmacopœia, has called forth a great number of works connected with pharmacy, and we have accordingly, a number of these now on our table. We shall take the first in the order of time.

Sir George Tuthil's *Translation of the Pharmacopœia.*—This is a hasty literal translation, got up to supply the market, and possesses no one quality to distinguish it from a school boy's exercise. It takes notice of none of the decompositions or doses, and indeed has not a single note or observation.

Translation of the Pharmacopœia. By a Scotch Physician, residing in London.—This is a contemptible performance. The mistakes are numerous, such as pounds for ounces, &c. The Scotch physician, is a pure misnomer, as it bears all the marks of the Egyptian hall on its front.

Translation of the Pharmacopœia with Notes. By Richard Phillips, F.R.S.L. and E. &c. This is the work of a well known chemist, and is highly creditable to his talents and scientific knowledge. The translation is faithful and accurate, and the notes replete with the most recent and most profound doctrines of chemistry and pharmacy The decompositions are well illus-

trated by tables, and the figures of the chrystallized salts are given in numerous wood cuts.

Pereira's *Select Prescriptions**.—This little work is calculated, we think, to be very useful among students, giving them in correct Latin, all the varied forms of prescribing, in bloodletting, blistering, the administration of medicines, &c. It is one of those text books, which will make up for deficiencies of education, without compromising the character of those who use it, and this cannot be said of most of the short cuts to knowledge.

The Chemical Decompositions of the Pharmacopœia.—An accurate useful, and cheap little work, by the same Author.

The Apothecary's Chart. By a Retail Chemist and Druggist.—This is on the approved plan of the well known Toxicological Chart. Its design is to shew, at one view, the formulæ of all the preparations in the London Pharmacopœia, which are usually made up by the apothecary or retail druggist, with tables of the weights and measures, the quantity of opium, mercury, &c., contained in particular compounds, and a vocabulary of the words and contractions used in the chart. It is excellently adapted for hanging up in the drug shop, and no apothecary or chemist ought to be without a copy.

X. CHEMISTRY.

New Alkali in Jalap. By Mr. Hume, Jun., of Long Acre.—The author has just extracted from jalap a substance similar to the recently discovered alkalies of opium, bark, nux vomica, &c. Having procured but a small quantity of this new substance, (for which he proposes the name of *jalapine*,) Mr. Hume is not yet enabled to give any satisfactory account of its chemical properties, nor of its action on the animal economy.

The mode of procuring jalapine is very simple. Coarsely-powdered jalap is macerated for twelve or fourteen days in strong acetic acid; a high-coloured tincture is thus obtained, which, when filtered, is to be supersaturated with ammonia, and the mixture violently shaken; a sabulous deposit will fall rapidly, and a few crystals will form on the sides of the vessel. The deposit and crystals are to be collected, and washed with distilled water; again dissolved in a small quantity of concentrated acetic acid, and reprecipitated by ammonia, added to supersatura-

* A selection of Prescriptions illustrating the terms used in prescribing; intended for the use of Students who are preparing for examination at Apothecary's Hall. By Jonathan Pereira, Apothecary to the General Dispensary, 18mo. p. 112, London, Anderson, 1824. price 2s. 6d.

tion, which throws down the jalapine in small, white, acicular crystals. Jalapine is without any perceptible taste or smell, and seems heavier than morphine, quinine, or other substances of this class; it is scarcely, if at all, soluble in cold water, and only to a small extent in hot water. Ether has no effect upon it; alcohol is its proper solvent. Very little trouble is requisite to purify jalapine from extractive or colouring matter, for which it appears to have a very slight affinity. Mr. Hume, jun. operated only upon an ounce of jalap-root, from which quantity he conjectures, that, when the process is conducted with greater accuracy than usually attends a first examination, it will be easy to obtain about five grains of jalapine.

XI. BOTANY AND ZOOLOGY.

In botany, we only think it necessary to mention a very learned paper on the mosses of the Genera Orthotrichum, Glyphomitrion, and Zygodon, by Dr. Hooker, and Dr. Greville*, which will do much we think to clear up the discrepancies and difficulties hitherto attached to them. The authors justly remark, that a more entirely natural and beautiful genus than that of Orthotrichum, as it at present stands, can scarcely be found in the whole department of muscology. We are glad to perceive that it is the intention of our learned authors to offer, from time to time, to the admirers of mosses, memoirs, and monographs, of the genera of this beautiful tribe. This paper, of which the whole is illustrated by good figures, gives a rich foretaste of what we may expect from their labours. We shall speak of De Candolle's Prodromus, in an early number.

Professor Carena's *Monography of Leeches**.—In this excellent paper, M. Carena has divided the genus Hirudo into ten distinct pieces. 1. Hirudo Medicinalis. 2. H. Provincialis. 3. H. Verbena. 4. H. Sanguisuga. 5. H. Vulgaris. 6. H. Atomaria. 7. H. Complanata. 8. H. Cephalota. 9. H. Bioculata. 10. H. Trioculata. Of every one of these, M. Carena has given a good description of their characteristic marks, natural habits, where found, &c., with occasional critical remarks.

The Eyes of Leeches.—On the subject of the eyes of the leech, he says, that as it may still be doubted whether the dark points placed around the anterior disk of the leech really serve for vision or not, he has preferred designating them by the name of ocular points. A leech may be often seen to elongate itself,

* Brewster's Edinburgh Journal of Science.
Memoire delle Reale Academia della Scienze di Torino. Tom. xxv.

and suddenly withdraw its anterior extremity on coming in contact with any body; and an individual leech, deprived of the anterior segments, including those supposed visual organs, was observed to be regulated in all its movements, precisely as other perfect ones. M. Carena, conjectures that they may be of use to the animal in obscure situations. Perhaps after all, the eyes of the leech may be merely adapted for the perception of light, and to regulate its movements; accordingly, leeches generally shun the light. There would seem to prevail a great error in supposing that, in all animals which possess eyes, the faculties of these organs must resemble the human eye, or speaking more generally, the eyes of the higher orders of vertebral animals. Yet experience, as far as it goes, proves that the mole, and many molluscous animals, form no distinct perception of objects, though they are directed by the visual organs they possess, to see or shun the light, as circumstances may require. We feel inclined, from a variety of considerations, to think that the ocular points of the leech are really eyes, such as exist in some of the invertebrate animals*.

XII. MISCELLANEOUS.

Mr. Rawlins's *Patent Invalid Bedstead.*—See plate.

"A. Bedstead. B. Swing Frame, shewing the Head and Foot Frames raised. C. Rising Head Frame. D. Rising Foot Frame. E. Rising Foot Frame, shewing the Elevation of the Knee Joint. F. Folding Side Frame. The patient lies on the mattress on the swing frame, which may rest on a mattress beneath; or if desirable to lie softer on a bed, and for the convenience of performing the offices of nature with cleanliness and comfort, the swing frame is raised up, by turning the handles at the head and foot of the bedstead, one or both as occasion may require, so as to admit a bedpan to be placed beneath the circular hole in the mattress, the cushion which fastens in underneath having been previously removed, by raising the swing frame higher, the bed beneath can be shaken up without inconvenience to the patient. The curtain rods are fixed in a very peculiar manner, so as to admit of the curtains being drawn entirely round the bed, and to fold over each other, thereby preventing all partial draughts of air; and the extra width of the tester-frame admits of the curtains hanging quite free from the bed-clothes, with which they commonly interfere. The swing frame with that part of the apparatus attached to it, may be taken away in about a quarter of an hour, if it is wished to use the bedstead without it, and it may be replaced in about the same time.

We have examined and highly approved of the ingenious invention of Mr. Rawlins, which ought to be an indispensable article with all invalids who can afford the purchase.

* Brewster's Edinburgh Journal of Science.

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ANDERSON'S

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OF

Medicine and Surgery.

Nº. IV. OCTOBER, 1824. Vol. I.

Art. I. *A Practical Treatise on Diseases of the Skin, comprehending an account of such facts as have been recorded on these subjects, with Original Observations. The whole arranged with a view to illustrate the constitutional causes of these Diseases, as well as their local characters.* By Samuel Plumbe, Member of the Royal College of Surgeons, &c., 8vo. pp. 412. London, 1824.

It is only, we had almost said, in the present times, that diseases of the skin have been studied with that care which their importance warrants; for, the warmest admirer of the ancients must allow, that what they have left us on this subject, is the least valuable portion of their writings. Even now, however, the investigation is but in its infancy, and on that account we hail, with welcome, every new work which, like Mr. Plumbe's, purports to advance its progress.

Mr. Plumbe prefaces his work with some remarks on the anatomy and physiology of the skin, which certainly are not unnecessary, as several of his curative intentions are founded on his peculiar views of its structure and its offices. It is a subject, indeed, which writers on the diseases of the skin have too generally neglected; whilst, according to Mr. Plumbe, others have seated some of the most desperate of cutaneous diseases in parts of the skin, the existence of which has been doubted; the *rete mucosum*, for instance, as we noticed in our last Number, he has affirmed to be altogether ideal, except in negroes. But, be this as it may, every person, we think, will allow, that a

knowledge of the physiology of the skin must be of essential use in the treatment of its diseases.

The skin was divided by Malpighi into three parts, or layers; the cuticle, the cutis, and the intermediate web-like membrane, which he named the corpus, or rete mucosum. The cuticle, Mr. Plumbe, informs us, is the production of the superficial vessels of the cutis, or true skin, and its office is to protect the delicate and highly sensible surface of the latter. It is porous, to allow the matter of perspiration to escape, and it is perforated in many places to give a passage outwards to the secretion of the sebaceous follicles. In disease it gives externally, a distinguishing character to many cutaneous affections.

The Cutis.—"The cutis, on the vascular energies of which," says Mr, Plumbe, "the production and nourishment of the cuticle depends, besides its more obvious and general offices as a covering to other parts, and as the structure effecting the separation of the perspirable matter from the mass of blood, gives in different parts of the body a seat to a most important structural arrangement, on the disorder of which some of the most obstinate cutaneous affections are found to depend:—the sebaceous follicles. These follicles are minute thimble-like depressions in the substance of the cutis. The larger kind are most numerously distributed over parts much exposed, and where flexures of the skin are formed; the secretion poured out in the former instance, probably forming a defence to the cuticle, under exposure to heat; and in the latter, operating to prevent the consequences of attrition. They are most easily distinguishable about the nose and mouth in men, as well as in females; but in the latter, they are also often seen in great numbers on the neck and upper parts of the chest: their secretion, which is entirely supplied by the vessels of the cutis, gives an agreeably smooth and glossy appearance to the skin of these parts, where their dimensions and number are not very considerable; but where the reverse is the case, the secretion at their orifices becomes discoloured, forming so many minute black spots, which much disfigures these parts, and gives them a dingy, unhealthy appearance.

"In the existence of papillæ on the skin in any part of the body, except those wherein the senses of taste and touch reside, and where their utility is obvious, as giving a much greater field for the extension of the nerves of such senses, and increasing their acuteness, I disbelieve altogether. I have never been able, by any glasses which could be depended on, to discover any vestige of them: it is needless to add, that that pathology which has been given us of the formation of papulæ or pimples, is incorrect *,

* Papulæ, or pimples, appear to originate in an inflammation of the papillæ of the skin, by which these are enlarged, elevated, and indurated. Bateman's Synopsis.

since every genus of this order makes its appearance on all parts of the body at times, *except* where papillæ are really and easily found."—pp. 3-5.

The Hair.—Another important hint in the anatomy of the skin, is the origin and growth of the hair; and it is probably from inattention to it, Mr. Plumbe thinks, that some species of porrigo have been looked upon as almost incurable.

"The greater degree," he observes, "of thickness and density of the scalp and other parts covered by the stronger kind of hair, would lead us, *a priori*, to suspect that they had other offices to perform beyond those of the skin in other parts of the body. Did it not appear that the cutis, in such parts, had no connection with the bulbous root of the hair, we should probably assign to it, as others have done, part of the office of producing and nourishing the latter: there can be no doubt, however, that the hairs have their origin completely beneath the under surface of the cutis, and derive their support immediately from the adipose membrane here disposed, and apparently having a particular arrangement for this purpose.

"The layer or adipose membrane, extended with different degrees of thickness on the inner surface of the cutis on different parts of the body, assumes under the scalp a material change of character. It is closely attached to the cutis, and on superficial examination, appears partially interwoven with the inner surface of this covering. It is firmly attached also to the bulbs of the hair, which seem to be implanted in it.

"The loose reticular membrane, distributed on the head between this structure and the pericranium, appears to answer a purpose with respect to it, very similar to one of those of the pia mater with the brain; and if the minuteness of the dissection does not deceive us, it sends off processes which dip down into, and divide the adipose structure into portions having a rounded capsular form; in the centre of each of which, three, four, or more hairs, appear to originate. Be this as it may, however, the origin of the hair in this structure, and its complete independence of the cutis, as regards its nourishment, is made sufficiently obvious, by an incision of a portion of the scalp previously removed from the head, just through the dense structure of the cutis, and the turning one portion back on the other.

"The cutis, therefore, a vascular and highly sensible structure, is penetrated by the hair, which does not, as far as the most minute injections, with the help of glasses, can show, receive any contribution of vessels for the purposes of nourishment from it: and if there is any analogy between the structure of the human hair, and that of the larger species of animals; the oleaginous secretion covering it, and giving to it its smooth and glossy appearance, is also derived from the adipose structure alluded to beneath the cutis; this fluid being conveyed along the centre of the hair by tubes which originate in the bulb.

"From a little above the bulb, as it passes up through the scalp, each hair is seen to receive an opake membranous covering, forming a kind of sheath; which sheath can be easily traced to the surface of the scalp and a little above it; appearing at this part as if formed by a process sent off from the cuticle. In minutely injected preparations, vessels may be seen passing on these sheaths, and originating in the adipose capsules, having no other obvious use than the support of the sheath and the hair it contains.

"The fact that the scalp is pierced by the hair, and has little or no share in its production or nourishment, I am particularly desirous of impressing upon the attention of my readers. Reasoning from analogy, we should be justified by this consideration only, in concluding that the latter *may* possess, when the former is in a state of disease, all the properties of extraneous substances. As regards the common ringworm of this part, it will be uniformly found evincing these characteristics in the mildest as well as most severe forms of the disease."—p. 9.

From the foregoing statement, our author thinks it obvious that the structure of the hair requires a set of vessels essentially different from those which produce the cuticle; the skin, in fact, having nothing to do with the nourishment of the hair itself.—The following, he says, are the offices of the skin, with which its diseases are most immediately connected:—1. Secretion of the perspiratory fluid; 2. the production and nourishment of the cuticle; 3. the supply of the sebaceous follicles, and the secretion of their contents; 4. the nourishment of the sheaths of the hair. These preliminary observations are concluded with some remarks on certain discolourations of the skin, which are not accompanied by any organic affection of its structure.

The work is divided into five sections, and these are again subdivided into chapters. The first section includes those *Diseases which obtain their distinguishing characteristics from local peculiarities of the skin.* In this division are included the varieties of acne and sycosis, and the different species of porrigo.

Our author thinks that the division of acne into four varieties of simplex, punctata, indurata, and rosacea is unnecessary, these states or forms of the disease depending merely on a greater or less degree of inflammation.

Acne.—"Acne," says Mr. Plumbe, "essentially consists in its original form of simple obstruction to the free passage of the sebaceous matter to the surface of the skin, by which a considerable degree of hardening of that surface is produced, as well as accumulation. The necessary result of such accumulation, in the course of time, is, the distension of the follicles in which it is contained, and their consequent inflammation.

"When the attention is first directed to follicular obstruction, the forehead, or temples, or parts of the face about the nose, are occupied by a number of little hard inflamed tubercles (acne simplex), usually exceedingly tender to the touch, interspersed with minute black specks (acne punctata), the former being formed of the inflamed and thickened follicle with its contents; the latter, of the discoloured sebaceous matter occupying its orifice. The skins of different individuals differ greatly in the number, as well as size of the sebaceous follicles: and hence, in a state of health, the complexions of some are said to be more clear than that of others, the copious distribution of the black spots giving a dirty and less healthy appearance to the part, while their minuteness in size and numbers leave the agreeableness of the red and white unimpaired."—pp. 16, 17.

But the simple appearance of such spots does not constitute disease; for in general frequent ablution and moderate friction are the only remedy they require. When these are not sufficient, the whole contents of the follicle should be squeezed out.

The medical practitioner is seldom consulted in this complaint, unless it has been of long standing, and is attended with a considerable degree of inflammation.

"The immediate exciting cause of this inflammation is usually found to depend on some accidental disorder of the primæ viæ—the hardness of the contents of the follicle, and apparent obstruction, frequently existing for some time without the excitement of mischief, till such obvious disorder occurs. Hence, instead of the solitary appearance of one of the tubercles here and there, on distant parts of the face, a considerable number, though not very thickly distributed, are observed simultaneously on the forehead, sides of the nose, chin, &c. There is great difference in the period elapsing between the commencement of the inflammation of different follicles, and its termination in suppuration; and consequently many of them are seen apparently only slightly inflamed, and presenting to the touch the resemblance of a small millet seed under the cuticle, while others are actually suppurated."—pp. 18, 19.

The inflammation never terminates in resolution; and when this seems to happen, it is only the absorption of matter which had been formed; at least, such is the opinion of our author. Persons of a florid complexion are most subject to follicular inflammation; though women, in general, suffer less from it than men. But females of a pale complexion and lax fibre often have the follicles enlarged, though not inflamed. Some are disposed to the disease, from original formation of the skin. In parts where the follicles are numerous, small pearl-like tubercles are observed on the skins of some individuals; and they are occasioned by the cuticle being impervious opposite to the orifice of the follicles in the cutis. They sometimes sup-

purate, but are generally absorbed. We have seen such tubercles, of the size of small pin-heads, on the skin of children who had been ill for some time of gastric fevers; and we have always found it a mortal symptom.

"When disorder of the digestive organs has been the immediate exciting cause of acne, the symptoms of the first affection are alienated, and there is no doubt that more formidable mischief is sometimes prevented by its occurrence: in the treatment of the mild and transient kind described, therefore, the state of these organs and the general condition of the system ought to occupy the chief attention: not so much, however, from the fear of doing mischief by sedative applications in repelling the eruption, but as leading to the most direct remedial measure. Repellents, as they have been termed, seldom have any effect in preventing suppuration, and this ought to be considered the most desirable course it should take. Frequent bathing the parts with warm water, and gentle friction with the mildest kind of soap, constitutes by far the best kind of local application, its effect being at once to allay irritation, and promote suppuration, and at the same time to remove any accumulation in the follicles of the part as yet uninflamed."—pp. 22, 23.

The use of stimulants, except in old and indurated cases, is obviously improper.

The foregoing remarks apply to what has been called acne simplex and punctata. When the disease is more extensive, and the digestive organs are habitually disordered, or when scrofula is present, a slow and unhealthy suppuration takes place, and, instead of a minute pustule, there is a considerable, though slowly formed, collection of matter, which disorders the substance of the cutis to a great extent. This, the acne indurata of Bateman, is in all cases the result of established disorder in the stomach and bowels. A minute examination will sufficiently identify this with the other forms of the disease; and, like them, it is also met with at once on the face, neck, and breast of the same individual. Speaking of its cure, our author observes—

"In the common treatment of this affection, it is lamentable to witness the complete deficiency of attention to common surgical principles; and though it is noticed by the author whose works I have so much referred to, that local treatment forms a great portion of what is necessary to be attended to, no notice is taken of any particular application beyond those of a generally stimulating character. It is clear, from the most superficial observation, that a disease, consisting in its origin of active inflammation, and in its progress of those variations only which particular constitutions or states of system originate previous to final suppuration, can rarely, if ever, require local stimulants; and in this particular affection, I

have no doubt that such applications, before the matter has been discharged from the tubercle, are highly improper. If any vestige of active inflammation remain, it should be soothed, and suppuration promoted by poultices and fomentations; and if any tubercle should be found assuming the blue colour without signs of matter coming forward, it should be freely punctured. As in the case to which I formerly alluded, of simple healthy inflammation of the follicle, where the orifice had been obliterated by the inflammation, and no external appearance but that of a minute tubercle existed, suppuration will, in almost all cases, be found effected, and the cure will follow infinitely more rapidly than where stimulants only are relied on.

"The contents of each tubercle being evacuated, and the temporary additional irritation which the puncture excites having subsided, the use of stimulants is plainly indicated. The absorbent vessels is capable of producing a very considerable effect on the thickened and discoloured cutis of the part in a very short period, even unexcited; but a very manifest advantage, notwithstanding, usually follows the employment of spirituous lotions. The oxym. hydr. dissolved in proof spirit, in the proportion of five grains to eight ounces, with which the spots are lightly sponged, seems to be entitled to a preference over other formulæ as lotions; but if made of greater strength, it frequently irritates the skin. Were it not for the unpleasantness of the application, the mercurial ointment would answer the purpose better by far than any thing else. In severe cases it may be safely depended on for doing all which any application is capable of.

"With regard to the constitutional treatment necessary, in all such cases as have come under my notice, the tonic plan seemed to be called for, and was followed, in conjunction with the local management detailed, by pretty uniformly successful results. The history of the patient usually disclosed a disposition to voracity, with little anxiety at any time by what species of food gratification was to be obtained. A furred, yellow tongue, offensive breath, frequent heat and feverishness, with considerable languor at intervals, and irregularity of bowels, seemed to have been the consequences which, however, with the exception of some debility, were speedily removed by a short alterative course of medicine. A plethoric state of system, with a generally healthy condition, is, I believe, incompatible with this affection altogether."—pp. 28-31.

The disease is sometimes confined to the tip and alæ of the nose; but it is seldom the effect of dram-drinking; and it may be said never to be a symptom of diseased liver. This is the acne rosacea; and it is generally the effect of foul feeding, or what has been called good living: acidity of the stomach is a frequent concomitant of the disease. When matter is formed, its evacuation by the lancet is called for, and at the same time emollient applications must be used, with gentle purgatives, and

a regulated diet. When the energy of the vessels has diminished, the stimulant plan may be of service.

Sycosis.—Sycosis, according to Mr. Plumbe, is acne or follicular obstruction, occurring on parts covered by hair; and its peculiarity is owing to the local irritation of the hair. In commencing its treatment, therefore, this cause of irritation should be removed, when it can be done without pain, and every little tubercle should be punctured at its first appearance. The constitutional remedies are the same as those of acne.

Porrigo.—Our author describes only three species, or rather stages, of porrigo—the scutulata, furfurans, and lupinosa. The porrigo scutulata, or common ringworm, is, he says, but the commencement of that disease, which, under bad management, answers to the description of p. furfurans and p. lupinosa.

"The symptom," he says, "by which this disease (the p. scutulata) is usually first discovered, is the falling off of the hair of the part. The attention being attracted by this occurrence, the scalp appears, on examination, to have assumed a somewhat scurfy and slightly reddened appearance. The hair remaining on the diseased part, is thin and irregularly scattered over it, the greater portion appearing to have been removed by the roots, while some have been broken off near to the scalp, the roots of which still retain their situation. Those which remain apparently growing on the part, will be found to drop off on friction, or to have, on being pulled, scarce any hold on the scalp.

"In the majority of cases, at their first commencement, these will be the only appearances noticed. The existence of the minute straw-coloured pustules, denominated achores, does not appear necessary to constitute the disease, as they are not seen for a short time later, and not till after some degree of itching and irritation of the part has been felt.

"The itching and irritation commencing simultaneously with the formation of pustules, the child who is the subject of the disease soon ruptures a few of them, and spreading, by the frequently repeated application of the nails to the spot, their contents over the adjacent parts of the scalp, extends the mischief with great rapidity upon it; the same destruction of the hair, and subsequent pustulation, marking its progress.

"When pustules are noticed, they are uniformly found with hairs growing through them; and if the disease has existed for a considerable length of time, and destroyed the greater part of the hair of the part, such pustules are found proportionately reduced in number; but still surrounding the few straggling hairs which remain; each single minute pustule appearing to be dependant on the hair in its centre.

"If the hair, as sometimes happens, be completely eradicated from the spot where the disease first appears, the skin assumes an

apparently healthy character; the disease, as regards this particular spot, may be said to have exhausted itself.

"In traversing the other parts of the scalp, however, the power of infection being kept up by the secretion of the pustules of such parts, till the new hair again appears in the original situation of the disease, a recurrence of the pustules takes place here, and the same destruction of the new hair is observed as of the old."—pp. 42-44.

The disease spreads only by the application of its infectious matter, and not by the mere communication of the specific action of the part to those adjoining. Our author has no doubt of this; and therefore looks upon the practice usually followed in this disease as inefficient and futile; applications to the part, unless they can deprive the matter secreted of its power of infection, being either useless or hurtful. The common attentions of a cleanly nurse are infinitely more effectual. Mr. Plumbe has found a disease similar to ringworm of the scalp occurring on the skin of other parts of the body; and in this he has found unguent. hydrarg. nitr. diluted, of service, he thinks, by depriving the secretions of their contagious properties. Why should it not have the same effect on the scalp?

The appearance of ringworm, in public seminaries or private families, always excites alarm, from the supposed incurability of the disease, and its proving destructive to the hair; but this is a false alarm; for not only may the disease be cured without difficulty, but the growth of hair will become as healthy and strong as ever. The hair, in fact, is never destroyed, except where the scalp has been deeply ulcerated; and such cases only occur in the haunts of poverty. The disease does not receive the name of scalled head, till scabs are formed on the surface by the accumulation of vitiated secretion from the pustules. With this accumulation the inflammatory action of the part is increased also; and the pain is then so much aggravated, that the patients are averse to any of the usual applications. In this case, the scabs continue to accumulate, the odour becomes exceedingly offensive, and the head swarms with myriads of pediculi.

We do not pretend to follow our author in all his speculations on the evils occasioned by the presence of hair in porrigo, but shall extract what he has said on the cause of the frequent occurrence of pustulation.

"The disease," he observes, "may be defined to be inflammation of a specific character, affecting the solid structure of the cutis. It will be recollected, that pustules only occur where hair exists, and that each pustule has usually one in its centre: and bearing in mind what has been already stated, as to the probable influence of

the hair on the scalp, where the cutis is actively inflamed, we may be warranted in the conclusion, that the specific irritation of the disease obtains an accession of strength from the local influence of the hair, where it penetrates the scalp; and that the formation of a pustule is the consequence of such accession.

"While, however, on any single diseased spot, some hairs, apparently growing from a healthy root (and on being torn up evincing all the appearances of a healthy bulb), are surrounded by a pustule, many, around which no pustule appears, are either dropping off, or separate without the employment of the slightest degree of force.

"We must not expect a return to health of the seat of the pustule, in the first of these cases, without the separation of the hair in its centre; for after a careful attention with good glasses to this point, I am persuaded that if it remains any length of time, it produces on a minute scale all the effects of an extraneous substance, and that it separates at last. In the latter, it will be obvious that the suffering the ends of the hair to remain sticking in the skin can only be productive of mischief in the same way, by increasing the irritation of the disease."—pp. 65, 66.

He informs us, however, that, in the progress of many cases of ringworm, where the stomach is disordered, where improper applications have been used, or where the skin is naturally very irritable, pustules sometimes appear quite different from those constituting the original disease. Here it is not necessary to extract the hair; they merely require poultices and sedative applications.

Mr. Plumbe now enters on the treatment of ringworm. He reprobates almost all external applications, but recommends the evacuation of matter from the pustules, and the extraction of every hair that can be removed without giving much pain. Shaving is not a sufficient substitute.

"This having been effected," he goes on to say, "and the part washed with warm water and soap, some astringent application, possessing the power of taking from the secretion its infectious properties, and at the same time sufficiently powerful to constringe the vessels from which it flows, and lessen its quantity, may be made use of.

"A solution of the sulphate of copper has been employed in some cases for this purpose: I believe the object to be more completely accomplished, however, by rubbing this preparation, in a finely powdered state, on the part, and then washing it off.

"The slight inflammation which drawing out the hair and shaving the part occasions, usually produces a few more pustules than would probably otherwise occur, if not kept under for the first day or two, by some sedative application. A careful examination should be instituted every morning, and if any pustules appear, they should

be at once removed, and the sulphate of copper applied, as at first, to the part. After two or three repetitions of this application, no fresh appearance of pustule takes place, and the circle of the disease is marked by small thin scabs of a darkish colour, and the same characteristics in other respects, as the common exudation from abraded surfaces to the cutis. These scabs separate in a few days, bringing with them a few of the remaining hairs which have separated, and leaving a shining red and irregular surface, which gradually loses its inflammatory character, having now and then a little scurf forming on it, till the new hair begins to appear."—pp. 72-74.

The treatment will require to be somewhat modified in long-established cases, where there is great accumulation of scabs, where portions of the surface are ulcerated, and where the vessels of the parts are in a state of high and confirmed irritation. Here fomentations, poultices, and cold lotions must be successively and diligently applied. In very obstinate cases, where the hair had been entirely removed, a cure was eventually produced by means of adhesive straps, bandages, and the cold lotion. In none of such cases was a seton in the neck of the least benefit.

Mr. Plumbe is decidedly of opinion, that porrigo furfurans and lupinosa would never have had existence if the p. scutulata had been treated properly at its commencement. We cannot agree with him in this; it may sometimes happen, but not always. In the latter he says, that, in addition to the increased number of the pustules, the vessels which form the cuticle are also morbidly excited, and assist in the production of that enormous mass of scabs so conspicuous a feature in both p. furfurans and p. lupinosa. The scabs are not formed by the mere exsiccation of the pustular fluid. On removing them, even in the worst cases, the surface is found to be inflamed and pustulated in the same manner as in p. scutulata. No change is required in the plan of cure.

"When," he observes, "by the removal of the hair or the scabs, and the operation of shaving, the scalp has been completely cleansed, its active inflammatory state will commonly yield to the persevering use of the cold wash. Now and then, however, it will be found assuming a considerable obstinacy of character; where the hair has not been drawn out by the roots, fresh pustules are constantly occurring, and the increased secretion of morbid cuticle continues; and where this precaution has been taken, though the formation of pustules or secretion of any fluid soon ceases, yet in this case even the redness sometimes remains, and the production of scurf continues.

"Under those latter circumstances, an assiduous application of

the spirituous lotion, and a frequent washing of the scalp with soap and warm water during the day, will, while it prevents accumulation of scurf, eventually subdue the inflammation, and restore the natural colour and healthy state of the part.

" When this species of the disease has been of long duration, a scurvy state of the scalp usually continues after all appearance of pustules, of irritation, or fluid secretion, has ceased, and after new hair has grown on the part. To remove this inconvenience, a weak solution of lunar caustic has been recommended, and is very beneficial. A lotion of alcohol diluted, if employed alternately with this, will be a useful auxiliary.

" In the common scurfy states of the scalp, this latter application will be generally (if regularly persevered in for a short time) found to supersede the necessity of any other; and will effectually prevent that irritation of the part, by which such states are sometimes followed. The efficacy of medicinal applications, except such as are plainly indicated on sound surgical principles, is about as great in this state as that of simple ringworm. The ointment of coculus indicus, so much lauded by Dr. J. Hamilton and Dr. Hume, has, in my hands, never been followed by any permanent advantage."—pp. 89-91.

This sneer at the coculus indicus will possibly have less effect on the reader, when he is informed that the Dr. J. Hamilton here mentioned is the celebrated author of the work on purgative medicines. Dr. Hamilton, indeed, has left proofs of its efficacy in the books of the Royal Infirmary of Edinburgh; and we have means of knowing that Dr. Willan wrote to him that he had found it effectual in every kind of porrigo, except the p. favosa. When Dr. Hamilton found it ineffectual in any instance, he attributed the failure to the berry of the coculus having been too much *burnt* before it was powdered; in which case it becomes quite inert. Dr. Hume, of Hamilton, the other gentleman, published at Edinburgh, in 1803, an Inaugural Dissertation *de Tinea Capitis*, in which he recommended the coculus as a valuable remedy. Perhaps he has spoken of it too highly; perhaps he had never seen the disease in its worst forms; but he declares that it succeeded with him in every case he employed it in, and where other means had failed. We believe he was the first person who ever used it in tinea. Convingius said, long ago, that it killed pediculi; and we have heard that Dr. Hume was induced to try it in tinea, from having observed, that, in those families where it was used to kill these vermin, scalled head had disappeared. In his thesis, he considers pediculi as an exciting cause of the disease. In the cure of tinea, however, Dr. Hume did not trust to coculus indicus alone; for he has expressly said, " Omnium remedium

optimum est munditi es."—For some other remarks on porrigo, we refer to our last Number.

The second section of the work is entitled—*On Diseases dependent on debilitated and deranged States of System, and consequent diminished tone of the Vessels of the Cutis.* In it are considered the varieties of purpura and the cutaneous affection of scurvy; and bullæ or blebs; and the diseases designated ecthyma and rupia. Our author thus very properly includes under one head, diseases which form parts of no less than four different orders of preceding writers. In the above-named diseases, it is through the constitution only that any effectual remedy can be employed, local applications being rarely admissible.

Purpura.—Purpura, in its most formidable shape, has attracted the attention of some of our most eminent practitioners; for, as Mr. Plumbe very justly observes, it is a disease which "frequently paralyzes the hand of the physician, and suspends in doubt and apprehension the decision of the most practised and fearless mind." In this disease, indeed, in one point of view, the probability exists of extinguishing life by extracting a few ounces of blood; in another, this measure appears to be a matter of absolute necessity. The best descriptions of the purpura simplex attribute it to a state of general debility; but both it and the p. hæmorrhagica are sometimes seen where no such state of the system exists. A loss of tone, however, in the vessels of the surface seems to be requisite to admit of that rupture of their extremities, and consequent extravasation necessary to the production of petechiæ; and it would seem also that the cause of such loss of tone must have a constitutional origin. Debility generally precedes it; but it is sometimes seen in persons who a day or two previous have been in apparent good health.

"It is usually accompanied," says our author, "with sensations of languor and lassitude, even in these; there is a furred yellow tongue and uneasiness in the head, nausea and constipation, and diminished appetite; a train of symptoms, in short, indicating the highest degree of derangement of the digestive organs. If this state of disorder exist, it has appeared to me not unfrequently that the most robust and full habits of body are more liable to petechiæ, though appearing partially, than those of an opposite character; and I have been led to form this opinion from having witnessed several cases, of which the following may be taken as a specimen:—

"A young female, usually enjoying pretty good health, of a robust habit of body, and florid healthy complexion, had complained for two or three days of nausea, constipation, uneasiness about the

head, loss of appetite, &c.; with a view of removing which, she had, the day before I saw her, taken some aperient medicine. The latter not appearing to have given the expected relief, she, on the following morning, had recourse to an emetic of ipecacuanha: after a few efforts to vomit had been produced, the persons about her were alarmed by the sudden appearance of petechiæ of very considerable size, distributed exceedingly thick over the whole of the face, neck, and shoulders, while the conjunctiva was almost entirely suffused with blood. Her complexion had been exceedingly clear previously, and the sudden and extraordinary change which the appearance of the disease effected, excited the highest degree of alarm. Her pulse was at this time hard and quick, and she complained of deep-seated pain in the chest: having however seen other cases of a similar kind, where bleeding was dispensed with, and a speedy cure brought about by the use of cathartics, I depended entirely on the latter, and made calomel an important part of what I exhibited. The offensiveness and pitchy colour of the evacuations, as well as the immense accumulation of undigested aliment which they contained, amply satisfied me that this was the best and most direct plan of treatment."—pp. 98-100.

Mr. Plumbe is inclined to the opinion, that disorder of the digestive organs always precedes purpura simplex, or petechiæ sine febre; and he is disposed to place debility of system and this disorder in the relation of predisposing and exciting causes of the disease. It is evident that no harm can arise in commencing the treatment with some alterative aperient; and purgatives will frequently remove every vestige of the disease, without having recourse to tonic medicines at all. The most effectual of these, when necessary, are bark and acids. Purpura simplex and hæmorrhagica differ only in degree. The description of the latter is given from Bateman, so that we need not repeat it here.

We have next a very elaborate and judicious examination of the cases published by Drs. Parry, Bree, Harby, Buxton, Nicholl, G. Johnston, and Duncan junior, and by Messrs. Rogerson and Pretty, and the Editors of the Medical Repository. We have not room to examine these cases individually, as the author has done, and shall therefore give the conclusions only which he has drawn from a careful examination of the whole.

"The particular circumstances," he says, "worthy of observation, on a view of the severer cases alluded to collectively, therefore, are, 1. That congestion in, and deranged secretion of, the liver, stomach, and bowels, are pretty uniformly disclosed, either by symptoms directly referring to these parts, or by the colour and appearance of the evacuations. 2. That medicines calculated to remove such congestion have been as constantly followed by decided

benefit; while recovery took place in no instance without free purging. 3. That the use of tonics is seriously detrimental, if not preceded by purgatives. 4. That the utility of bleeding is exceedingly doubtful, and that in no such cases has it been followed by any thing more than temporary alleviation, *except accompanied by purgatives.* 5. That the state of the pulse, together with the result of the *post mortem* examination in the two cases, in which the latter was had recourse to, justify the opinion, that actual inflammation forms no part of the disease, and, consequently, that the utmost good effect to be expected from abstraction of blood is confined to the temporary relief of congestion; and, 6. That when recovery took place, it was without the use of tonics, such as bark and acids, or good living. Another case, equally instructive on these points, is recorded by Dr. Bateman *, in which the decided superiority of evacuating remedies, and the danger of bleeding, are both strikingly exemplified."—pp. 126-128.

Of the two other species of purpura mentioned by Dr. Willan, the peculiarities of the first, the p. urticans, are hardly of sufficient importance to justify a separate name or consideration; and the other, the purpura contagiosi, is merely the petechiæ of low fevers.

Except in so far as regards the cutaneous affection, it would seem that little resemblance subsists betwixt purpura and scurvy. Mr. Plumbe seems to think, that, even under many privations, the constitution will bear up against the latter much longer in warm than in cold weather, and this advantage, he thinks, is owing to regularity of the bowels.

"The fact," he says, "that the disease begins to disappear, without important alterations in the diet of the patients, as they approach warm weather, has appeared to me to be attributable to the more regular action of the bowels, brought about by the increased flow of perspiration and biliary secretion consequent thereon, the direct effect of which must be to remove the congestion in internal organs, on which the constipation and uneasiness in the epigastrium depend. My own observation in such voyages has induced me even to consider the minor degree of nourishment contained in salt provisions as of far less importance in inducing the disease, than the absence of that gentle excitement to the bowels which vegetable substances are known to produce. I admit, however, that meat which has been long salted, and which consequently has suffered a material diminution of its nutrient properties, is considerably more liable to induce the disease than that which ought to be served out to seamen in long voyages; that is, meat which has been salted as recently as possible before the ship sails; but in such cases a more than usual obstinacy of disposition to constipation is constantly observed.—pp. 132, 133.

* Edinburgh Medical and Surgical Journal, Vol. IX.

Pemphigus and Pompholyx.—We cannot say that we have found any thing original in Mr. Plumbe's description of pemphigus and pompholyx; but as the books from which he has borrowed are not probably in every person's hand, we shall extract some part of it. He thinks (and, in our opinion, justly), that pemphigus and pompholyx are the same disease; the first being discriminated from the other merely by the presence of fever, at first simple, but afterwards of the typhous character.

"When the appearance," says Mr. Plumbe, "of the vesicles of pompholyx is not preceded by severe indisposition, it is ushered in by languor, lassitude, and feelings of general debility. It usually first attracts the notice of the patient in the form of a small vesicle about the size of a pea, which in twenty-four hours becomes as large as a walnut, at which time it is commonly broken with the smallest degree of violence. Two or three of these may perhaps be seen at a time on different parts of the body, but their most frequent situation is on the lower extremities. Here and there a small red speck, evidently formed by the rupture of a minute vessel on the surface of the cutis, is discovered intermixed with these, which is to be considered the incipient state of the vesicle. The extravasation of blood is sometimes sufficiently great to give the latter a bluish colour, precisely resembling the vesicle of scurvy described in a preceding page, when, its contents being let out, they assume a resemblance to bloody water. In other cases the fluid consists merely of yellowish serum."—pp. 137, 138.

If properly treated at its commencement, it is not a tedious disease. We have known it recur repeatedly in elderly people; in which case, when there is intermission in the pulse, the patient has been suddenly cut off, apparently by effusion into the chest. Speaking of the production of this disease, Mr. Plumbe observes—

"A state of the system or of internal organs seriously interrupting the process of chylification, and in which consequently the nutritive properties of the blood are much reduced, is as favourable to the production of pompholyx, as of scurvy and purpura; and the analogy of the former to the latter is proved by the badly nourished state of the vessels of the cutis existing in it, the slightest pressure being generally enough to break them down sufficiently to produce a bruise of the part."—pp. 139, 140.

Such is the usual appearance of pompholyx, but there are on record three late instances of its appearance as an epidemic. In two of them it was named pemphigus, in consequence of having commenced with fever. In these it was probable that a vegetable poison had exercised an influence in bringing on the disease. The use of purgatives and sometimes an emetic,

with refrigerant medicines, were effectual in every one of these cases. With regard to the disease in general,

"the constitutional treatment adopted must, of course," says Mr. Plumbe, "be modified according to the existing symptoms. The character of the fever with which the disease is accompanied will influence it to a certain extent; but the general principle laid down for the management of purpura, in the use of purgatives, is in all cases perfectly applicable here, whether accompanied by fever, or unattended by marks of great constitutional disorder. The same species of deranged biliary secretion, though not to so great an extent, has been generally noticed where the evacuations have been examined; but such derangement is removed with considerably less difficulty. When things are in a proper state in this respect, the febrile symptoms become mitigated, and the patient receives much benefit from the use of tonics.

"The local treatment should consist of puncturing the vesicle as soon as it has attained such a size as to be in danger of being inadvertently broken, and protecting the collapsed cuticle from being rubbed off or disturbed."—pp. 143, 144.

The disease, termed by Dr. Willan, pemphigus infantilis, and by Dr. Stokes, p. gangrenosus, has the character of very aggravated pompholyx, with great debility and low fever. Dr. Stokes, in this disease, made use externally of an ointment strongly impregnated with the extract of *scrofularia nodosa*, or great figwort. Its use was preceded by a poultice of oatmeal and porter. It must be of the consistence of honey, when applied, and should be laid on very softly with a feather. He gave yeast internally. This practice, though most of it that of a female quack, was more successful than the one adopted by the medical practitioners.

Ecthyma and Rupia.—Ecthyma is said to be an eruption of inflamed pustules, termed phlyzacia, usually distinct, and arising at a distance from each other.

"Almost the whole of the cases," says Mr. Plumbe, "which I have had an opportunity of observing, have occurred in young people; the majority in young men, who, with constitutions originally not of the strongest class, had imprudently indulged in excesses and irregularities to a very great extent, accompanied by privation of rest and other depressing circumstances. Very frequently in such cases it is mistaken for a venereal eruption, and the patient himself is readily made to believe in an opinion which his habits have made so probable. If mercury be had recourse to, the dried scabs of the disease grow on the part rapidly, becoming of a dark brown colour, exceedingly hard, and of a conical form, presenting, in fact, on a minute scale, the characters of the disease termed rupia."—pp. 149, 150.

Measles, scarlatina, and many other diseases followed by debility, are occasionally exciting causes of ecthyma. In this case,

"it is usually seen in its very earliest stage about the waist. It exhibits a few reddened and slightly elevated spots, covered with a very thin lamina of cuticle, which readily separates. Some of these have a minute elevation in their centre resembling a vesicle: the latter, however, contains nothing like the serum of the herpetic vesicle, but a glutinous fluid, which dries upon the part, and forms, with the morbid cuticle, an elevated scab of a conical form, the basis of which in a day or two is surrounded by a small inflamed areola. The surface of this areola is soon covered with a lamellated scab, and a scale of considerable magnitude is thus formed. During the continuance of the disease, many of these scabs separate; and if the strength is improved, the part beneath returns to a healthy state. Now and then, however, this process is repeated several times, and successive exfoliations continue to be produced.

"The minute examination on which the foregoing description of the spots of ecthyma is founded, has led me to think that the term pustule is very improperly applied to them. Taking into consideration the state of system existing in all cases as its predisponent cause, it would appear that an active inflammatory and suppurative action on the surface of the body is, of all events, one least to be expected to constitute the essence of the disease, and, accordingly, the kind of examination alluded to discloses a state of vessels materially differing from such an action."—pp. 151, 152.

Our author pursues the opinion broached in the latter part of the above quotation, through a piece of ingenious but subtle theory, with which we think it unnecessary to trouble our readers. In this disease we have always seen the vesicle he mentions, but never without some degree of pain and inflammation. We have known it repeatedly attack the metacarpal phalanx of the finger in a single spot, sometimes on one phalanx, sometimes another, except that of the little finger; if left to itself and not irritated, the inflammation gradually abated, and the scab formed and fell off in a short time; but if fretted, the inflammation increased, and an abscess formed under the vesicle. Preceding the disease, there was considerable irregularity of abdominal action.

Ecthyma, where the spots are small and numerous, has been mistaken for itch; and Mr. Plumbe has met with a case where sulphur was used both externally and internally, and the sulphur did not aggravate the cutaneous affection. The patient rapidly recovered by the use of tonics and sea-bathing. In this complaint, Mr. Plumbe has found the latter remedy always beneficial. As far as he has been able to learn, the blackened

and prominent scabs of rupia, are never seen but in the lowest classes of society, where previous disease had reduced the patient to the lowest stage of weakness.

In the third section we have the author's remarks on *Diseases exciting a probably salutary influence on the system, originally produced by, and usually symptomatic of deranged digestive organs, and characterised by active inflammation.* In this section we find the porrigo-favosa, and p. larvalis, the pimples of strophulus, lichen, &c., and urticaria, and also the vesicular formed affections, herpes, and thrush, and the carbuncular boil of the cutis.

Porrigo-favosa.—Mr. Plumbe has separated these two kinds of porrigo from those we have already treated of, because they are not merely of a local character, but have always a constitutional origin, and of course require remedies which act through the medium of the constitution. We need not repeat here, his borrowed description of the disease, but shall extract the following remarks, which have some little appearance of originality.

"In removing," he says, "the scabs of this disease, whether existing on the head or other part, we discover a reddened and inflamed surface, pouring out, with excessive rapidity, a viscous transparent fluid, which speedily dries, and forms fresh scabs of various shades of colour, from a transparent yellow to a dark brown. An areola of inflammatory redness usually surrounds the part, as if the whole energies of the vessels of the diseased spot, and adjacent cutis, were called forth in keeping up the fluid secretion.

"This state of matters will be constantly found, whenever the scabs are removed; in doing which, a small quantity of blood sometimes flows from the surface. The fluid secretion, however, at no time (except where constant irritation is kept up by picking the scabs, which children are accustomed to) appears like pus; for it is not opake, nor does its chemical analysis, according to Alibert, afford similar results. The surface is not ulcerated, but merely abraded; the fluid, as I have before observed, being poured out from the open mouths of its vessels.

"In the management of this disease, there are few points of importance beyond those which are comprehended in attention to the general health. The state of system under which it usually occurs, as a spontaneous disease, will be found more frequently to indicate the necessity for depletion and alteratives, rather than tonics, which have been recommended.

"Applications which allay irritation and diminish pain, are useful auxiliaries; and these together will be found adequate to the necessities of any case of the disease, not occurring on the scalp. On this latter part, however, obstacles intervene, requiring some alteration of treatment. Here the disease may be considered as

constantly under the influence of irritation from the hair, while the glutinous secretion lodging, and being retained upon it, prevents any application to the affected surface, and becomes a source of mechanical irritation, sufficiently powerful to counteract the effect which internal remedies may be supposed to have in subduing it. In protracted cases, such as those detailed by Alibert and others, where the mischief and torment of the disease are aggravated by myriads of vermin, and the accumulation of weeks and months of the secretions of the part; where neglect and filth have contributed, from the beginning, all their influence to support the disease; the most material portion of our attention must be directed solely to the part. To remove such collections of filth, at the risk of some pain to the patient; the scabs in the first place, by continued soaking in warm water, with a plentiful use of soap, and the hair afterwards by the razor, are steps of absolute necessity, without which our time and subsequent exertions may be fruitless.

"In such cases, too, a considerable extent of ulceration is sometimes discovered, though not often sufficiently deep to affect the roots of the hair. But whether ulceration exists or not, the use of fomentations and poultices are necessary to subdue the inflammatory action of the vessels of the part; and when this has been effected, a little attention to the general health is sometimes all that is necessary to the cure."—pp. 162-165.

In spite of every care, the effusion of viscous fluid on the part is now and then still kept up apparently by a morbidly relaxed state of its vessels.

"An effectual application will be found in a solution of caustic, or sulphate of copper, in such a case; these fluids are to be applied with a camel's hair pencil to the abraded surface two or three times a-day, until the discharge ceases; they appear to act by constringing the relaxed vessels on the surface from which the discharge oozes, and in some cases, when their use appears necessary, their strength may be considerably increased with advantage."—pp. 165, 166.

Like ringworm, p. favosa is propagated by infection, but may be speedily crushed in the bud by proper measures.

The porrigo larvalis, or crusta lactea of infants, differs very little from the former in any of its important characteristics; and it requires treatment only of the simplest description. In its external appearance it has a near resemblance to impetigo; only that the latter appears oftener on other parts of the body than on the face and head, and, in general, is more difficult of cure. We need not give Mr. Plumbe's description of p. larvalis, as it also is borrowed; but we may observe, that it appears in children who are strong and healthy, and who have been most liberally fed. Our author indeed thinks that more inattention to

cleanliness, in impoverished subjects, is not capable of producing it. In his opinion it is a grand and powerful remedial measure of nature; and such has been the opinion from time immemorial, we believe, of all the old women in the habitable globe.

"The constitutional treatment," says Mr. Plumbe, "should generally consist of mild aperients, exhibited in such doses as to keep the bowels gently acting, and effect a gradual reduction in the fulness of the habit.

"Local applications should be such as are conformable to the obvious indications of nature. Instead of powdery substances, or astringent ointments, poultices, if they can be applied, should be had recourse to, and preferred to all other applications: they relieve the irritation of the part by encouraging the discharge from the surface, and thus furthering the object of nature, the cure is consequently much more speedily, as well as more safely brought about."—p. 180.

Strophulus—We come next to the popular eruptions of infants and adults, denominated strophulus, lichen, &c. Our author thinks that strophulus has been needlessly divided by Dr. Willan into five species.

"The constitutional exciting cause is, of course," he says, "pretty nearly the same in all cases where the affection, as in its severer forms, has such an origin; but there is every reason to think that the skins of infants are frequently covered with pimples from the mere operation of local stimulus, either in the form of rough clothing, or by exposure to undue degrees of heat, without the slightest derangement of internal organs.

"It is by no means a common thing to see the skins of young infants free from clusters of red pimples, resembling what is represented under the designation of S. intertinctus and S. confertus; and that such affections should take on an active character under bad management, or disordered stomach or bowels, is not a matter of surprise. Inattention to cleanliness seems to be also a grand cause of such aggravation in numerous instances, and indeed there is reason to believe that where this is attended to, and the state of the bowels, and quantity and quality of the food carefully adapted to the age of the child, this affection rarely requires the notice of the medical attendant."—pp. 182, 183.

We think it needless to describe appearances so well known by the names of red and white gum, tooth-rash, &c., and therefore shall merely give some of our author's remarks on the pathology and treatment of the disease.

"That the cutaneous affections of infants," he observes, "assuming the form of pimples should be so common, is explained by the greater degree of vascularity of the cutis, and superior delicacy of the cuticle. In the formation of a pimple, an unusual degree of

activity in the vessels of the spot is necessary, and this condition is one which the vascularity in question is peculiarly calculated to supply. Turgescence to a certain extent seems likewise an absolute requisite, and such turgescence is not at all impeded by the cuticle covering the spot, which readily yields to the impulse of the circulation, and a minute effusion of lymph takes place under it."—pp. 186, 187.

"In a constitutional point of view, little seems requisite beyond a modification of diet and clothing, and occasional aperients; but the influence of the warm or vapour bath in all cases where the eruption gives uneasiness, is both locally and constitutionally productive of the most decided advantage."—p. 188.

Lichen.—Lichen is nearly the same disease in adults, that strophulus is in infants; and it generally makes its appearance in hot weather.

"Like strophulus," says Mr. Plumbe, "the milder cases of this affection may be considered indicative of pretty good general health, though it is stated now and then to occur under states of great constitutional debility, when the pimples wear an appearance in colour not much unlike petechiæ.

"The description of lichen most conformable to necessary precision, without partaking of the complexity of Dr. Willan's arrangement, should be as follows:—

"An eruption of pimples occurring, generally, first in some part of the upper half of the body, as the face, neck, arms, &c., at seasons of the year when circulation begins to be determined with unusual force to the surface of the body, as in the spring and the approach of summer. The extent of the eruption varies considerably, according to the degree of exposure to heat and violence of exercise or labour to which the patient is accustomed, being in some cases partially diffused, and merely attended with pretty severe tingling and itching; while in others the eruption extends over almost every part of the body, and is accompanied by symptoms of general irritation and fever (l. simplex.) The pimples are larger, paler, and showing appearances of less activity of inflammation in situations which are exposed, than in others protected by the clothing; and when they occur on parts covered by the finer kind of hair, as on the chest, arms, legs, &c., they are often found to have one or more of such hairs growing from their centre (lichen pilaris); the general disposition to irritability of skin appearing to be aggravated at the point where the hair penetrates it. When the pimples are so situated, and frequent friction is resorted to, to allay the itching and tingling, they appear to be speedily much increased in magnitude, and not unfrequently to pour out a bloody fluid round the roots of the hair. Now and then, from causes not clearly ascertained, the eruption, instead of being diffused, is limited to circumscribed patches, and hence the term circumscriptus has been employed to give this appearance its place as a species.

"When any accidental cause of disorder of the digestive organs or exposure to cold has taken place, the eruption is of a more aggravated kind, and its appearance is accompanied by so much derangement of system, as to give it the character of an exanthematous fever."—pp. 190-192.

The species of Dr. Willan, our author thinks, depend solely on the greater or less violence of the disease. Obstinate chronic complaints are said to be sometimes relieved by its appearance.

"In the treatment of these affections," he says, "mild saline aperients are plainly indicated, but medicines which determine powerfully to the surface of the body aggravate the most troublesome symptoms; the itching and tingling being particularly increased by them during their operation, while but little alteration in the disease seems to be ultimately effected. A low diet and regimen, avoiding exposure to the heat of the sun and violent exertion, are also very necessary."—p. 195.

The occasional use of the warm bath is also beneficial.

"From some observations," he continues, "which I have lately had an opportunity of making on the sulphur vapour bath, I am induced to think it a most powerful instrument in the hands of a judicious medical man in the treatment of lichen, though it should not be recommended till the bowels have been some time kept open, and the system, if the patient be of a full habit, has been a little reduced. The itching and tingling during its operation is rather severe, but it is followed by a much more tranquil state of the circulation in the cutaneous vessels, and the cure is altogether materially expedited by it."—p. 196.

A description of the lichen tropicus, or prickly heat of warm climates, has been given by Bontius, Hillary, Clark, Mosely, and Johnson, but it is the account of it by the latter which is here extracted and warmly eulogized. The subject, however, must be familiar to most readers.

Prurigo.—Prurigo is introduced into this section from its resemblance to lichen, though, perhaps, from its originating so often in local irritation from inattention to cleanliness, it ought rather to have been placed at the head of the next one. It has its name from the violent itching of the papulæ.

"Pimples, however," says our author, "are by no means necessary to form the disease called prurigo, according to the general acceptation of the term; mere itching only existing in the greater number of cases coming under the notice of the medical practitioner. Like the majority of other cutaneous diseases attended with itching, this sensation is much increased by exposure to heat or irritation, whether produced by exertion or warm clothing; and hence in prurigo it is most troublesome when the patient is warm

in bed, and when he has been induced to resort to friction to relieve a trifling degree of it. Forbearance is a grand point in all such cases, and should be suggested to the patient as a part of the management of his disease.

"By far the greater number of cases of this affection which come under the notice of the medical practitioner are limited in extent, and confined to particular situations; the most troublesome being those where the generative organs and their neighbourhood are affected; and it seems that neglect of frequent ablutions of these parts is often instrumental in producing it."—pp. 202, 203.

With regard to the general treatment—

"Cleanliness and the warm bath," he observes, "are the most important remedial measures to be had recourse to in the treatment of prurigo, as it occurs on the superior parts of the body in persons with unimpaired general health; but from the neglect of the affection at its first commencement in the neighbourhood of the scrotum and anus, a chronic morbid action of the vessels of these parts is sometimes permitted to be established, in which such measures do no good, and the patient's life is not unfrequently rendered miserable by the almost incessant itching and irritation attending it.

"Alibert and Dr. Willan prescribe sulphur in this affection, to be exhibited internally; it is probable, however, that this medicine has no advantage over other aperients."—p. 204.

Mr. Plumbe here attacks the Theory and Practice of Mr. Wilkinson, who has asserted that the "*Secretions on the skin, forming the diseases of this part, are always essentially the same; that the varieties of the eruptions are produced solely by the conformation and constitution of the subject;* and that a vast majority of such diseases are easily cured by the same means." Mr. Wilkinson's remedies are undiluted aromatic vinegar and sulphur externally, and Plummer's pill and arsenic internally.

It has been stated that prurigo sometimes ends in itch; but such a termination, Mr. Plumbe thinks, must be extremely rare. The opinion of Dr. Willan that it is produced by a peculiar insect, does not appear to have been confirmed by subsequent observation.

In this disease, the best local applications are lotions of calomel and lime water.

"When the pruritus," says Mr. Plumbe, "is concentrated about the verge of the anus, a pledget of lint dipped in the lotion should be introduced into the rectum, and retained there, while the adjacent parts are frequently wetted with the same. The folds of integument at the extremity of the rectum are more frequently the origin of the diseased secretion than is generally supposed, and if these can be kept by ablution free for a few days from irritating secretions, and the above application be satisfactorily made, the perineum, scrotum, &c. soon return to a healthy state.

"Now and then, however, in old standing cases, where the morbid action has been a long time established, much difficulty is experienced, in which event, if we expect to effect a permanent recovery, it must be by exciting a degree of active inflammation of the part which shall be adequate to the bringing about a total change in the action of its vessels."—p. 215.

Urticaria.—Urticaria is so well known as hardly to need description. Though produced in general by temporary or accidental disorder of the system, it often occurs as an idiopathic affection, the consequence merely of extraordinary irritability of the skin. In severe cases produced by substances received into the stomach, the tumefaction which takes place is greater about the neck and face than on other parts.

"The high degree of tumefaction above mentioned," says our author, "is not generally produced by any of the ordinary articles of food or drink, but usually follows the reception into the stomach of such as the patient is not constantly accustomed to. Almonds, mushrooms, cucumbers, honey, fruits of different kinds, opium, &c. have been particularly noticed among these; but the poisonous properties of fish, in a particular state, not well understood, is its most common cause. Mussels and lobsters seem to have been most frequently possessed of this property, and several fatal instances have occurred of their deleterious power. The general impression seems to be, that the commencement of the putrefactive stage in the fish generates the poisonous properties in question; and from my own observation in one or two cases, as well as the report of a medical friend, who has many years resided in the neighbourhood of Thames-street, I am inclined to consider this to be the fact. The lower classes of people, both men and women, attending the fish markets, are constantly affording cases of this kind, and, indeed, it is so common as to excite but little alarm. It is generally ascertained to have been produced in such cases by eating the refuse of the market, or the cheaper kind of shell-fish, particularly the mussel.

"The poisonous properties in question are by no means confined to the fish of this climate: it is more common, as well as more violent, within the tropics, both in the neighbourhood of land, and many degrees out at sea, and hence an important obstacle arises to the belief of its dependence on any particular species of sustenance which the fish may have obtained."—p. 223, 224.

The poison is supposed to be diffused over every part of the fish; and it is said to be in its greatest activity when the fish is approaching to a state of putrefaction; at least this has been ascertained to be the case in a few instances. Our author will not allow that copper is any way concerned in its production.

"The lower class of people," says Mr. Plumbe, "who work in

and about Billingsgate are, as before observed, very subject to this accident; and a general idea prevails among them, that large quantities of vinegar are calculated to check the violence of the symptoms; they are accordingly accustomed to drink it to a great extent as soon as they are made aware of the commencement of the disorder. I am not aware whether sugar has been tried as an antidote in any instance in this country, though from Dr. Burrows' account, it has been employed with success by one gentleman in numerous instances. Ether, in doses of twenty, thirty, or forty drops, given every half hour, is also mentioned as a remedy of great efficacy. In the slighter cases, produced by eating fish, if the disease is left to itself, the irritation and tumefaction begin to subside at the end of thirty-six or forty-eight hours, and it never reaches the duration of common febrile nettle-rash, occurring from other causes."—pp. 229, 230.

The description of the febrile nettle-rash is given from Willan. Aggravation of the febrile symptoms and delirium, attend its retropulsion; in which case blisters should be applied to the surface, in order, as speedily as possible to produce a salutary counteraction.

"Where the eruption is unrepelled, the state of the febrile symptoms will point out such measures as the case requires; but it should be always borne in mind, that morbidly increased determination to the skin constitutes some of the most troublesome parts of the disease; and medicines, therefore, which increase this, such as sudorifics, ought not to be employed. The bowels should be copiously evacuated, and kept open by sulphate of magnesia, exhibited at proper intervals, perhaps every four hours, alternately with the nitrate of potash, in doses of twenty or thirty grains."—p. 235.

A corresponding diet and regimen should be observed at the same time.

"Distension of the stomach, even if effected by the mildest and least irritating substances or liquids, has appeared to be a cause of nettle-rash; and it is not improbable, that, in delicate females, it has given occasion to the most obstinate and protracted cases of this affection, where the medical attendant has been defeated in every attempt to find a remedy. I have lately had an opportunity of seeing a case of this kind, in a young female, answering to this description, who, as I had been informed, had consulted and followed the prescriptions of various medical men of reputation, for the last three years, without material change in the troublesome character of her disease. Every variation in diet had been had recourse to, and various plans of medical treatment had been tried: she had been at one time much reduced by aperients and low living, at another directed to live on animal food, and take wine. A vegetable diet had been found most consistent with comfort, but had not been attended by a complete cradication of the disease. In-

quiry into her habits, as regarded her appetite, and the frequency of her meals, led to the idea above mentioned, and she was directed to eat oftener, and limit the quantity at each meal to four or five ounces; to use the tepid bath twice a-week, and have recourse to a saline aperient occasionally. Under this plan of management, she has been secured from any further annoyance, though now and then admonished by a spot or two, after an infringement of its rules."—pp. 235, 236.

The urticaria, sub-cutanea, and tuberosa, of Willan and Bateman, are extremely rare. In case of retropulsion, blisters to the surface are also indicated in these.

"The import," says our author, "of the term herpes, is now generally understood to be an eruption of clusters of vesicles of various sizes, from the minutest distinguishable to the naked eye, to that of two or three barleycorns, situated upon a red and inflamed areola of skin. The term, as applied by the older writers, comprehended an extensive variety of other cutaneous affections very materially different."—p. 240.

We must not follow Mr. Plumbe while he delineates the appearances of the disease; but we may observe that the picture is well drawn.

"From this description," he says, "it will be obvious that the duration of the complaint depends entirely on the extent at which the eruption may arrive, and hence the answer to be given to the impatient inquiries of the sufferer should be particularly guarded, till a day or two has elapsed without the appearance of a fresh crop of vesicles, for it is only under such circumstances that an opinion can be formed as to the cessation of the excessive smarting pain and tenderness belonging to it."—p. 244.

His remarks apply more particularly to the shingles on herpes zoster, which is confined to the back of the neck, the shoulders, and waist. The herpes phlyctænodes appears indiscriminately in other situations.

"The disease under consideration," observes our author, "whether answering the description of h. phlyctænodes or h. zoster, is materially, as well at its commencement as during every stage of its progress, unlike any other cutaneous affection; nor does it, either in its mildest or severest forms, approximate to, or terminate in, any other which has been separated from it by the classification of Willan: its being confounded, therefore, with eczema, impetigo, or erysipelas, as remarked by Dr. Bateman, could only have been the result of great inattention to its generic characters. The red inflamed areola on which the vesicles appear, and the uniformly transparent character of the fluid which they contain, together with their regular progress towards exsiccation, and ultimate falling off of the branny scales which they form, constitute sufficient grounds of distinction from all others."—pp. 246, 247.

Mr. Plumbe has nothing to observe on its causes, which may not be found in Bateman. In the following remark we entirely agree with him:—

"In the absence," he says, "of any data regarding the manner in which disorder of vital organs can produce cutaneous eruptions, we are fully warranted in supposing, from the symptoms usually preceding herpes, and commonly disappearing after this eruption has gone through its course, that mischiefs of some importance to such organs are averted by it; in short, that it exerts all the influence, and is entitled to the estimation of, a natural counter-irritant. In this character it has in two or three instances, in delicate females, within my own observation, checked the progress of symptoms which had given rise to great anxiety respecting the state of the thoracic viscera."—p. 249.

On the treatment, he observes:—

"Like the prickly heat, the eruption of herpes can never be checked by any medicine or medicinal application; and those, therefore, which relieve the sufferings of the patient ought not to be neglected. Solutions of ceruss. acet., or the liq. plumb. acet. dil. with the addition of alcohol, may be applied with advantage by means of wetted linen: they lessen the pains in question, *but never check the eruption in its course.* The vesicles ought not to be cut or rudely broken, such a proceeding generally rendering the separation of the scab considerably more tedious than it would otherwise be; but if care be taken to puncture each individual vesicle early, so as to allow of the free escape of the fluid, the pain is much diminished, and the irritation sooner subsides.

"The constitutional treatment consists only of mild saline aperients and low living."—p. 250.

Alibert and other French writers entertain a great dread of metastasis from herpes; but such as they mention were evidently metastasis of very different cutaneous affections.

"As regards the pathology of herpes," says Mr. Plumbe, "it may be said to consist of effusion of serum from the minute extremities of vessels on the surface. It does not seem to be in any case dependent on impediments existing locally to the proper functions of the skin. The cuticle, in a strong and healthy state, is elevated by the fluid, and forms pretty strong parietes for each individual vesicle."—p. 252.

Looking upon this disease as a counter-irritant, he proposes in some cases to assist nature, and accordingly observes:—

"I have in two or three instances applied small blisters to the uninflamed skin on the side of the eruption, on which the latter seems disposed to extend, not only with the effect of checking such extension, but of producing a shrivelling of the vesicles already formed, and cutting short its progress altogether; avoiding at once

its tediousness, and all the pain attending it. The smarting and tenderness in the vesicles near the blister are soon diminished, nor has it in the cases alluded to appeared that the blistered surface healed less readily than under other circumstances. Care should, however, be taken not to apply the blister to the vesicles themselves, as it not only fails to raise the cuticle, but irritates the cutis, and is followed by a superficially sloughy surface of the latter on the site of each vesicle, forming so many little irritable indentations, which heal very tediously."—pp. 253, 254.

With some remarks on herpes labialis and preputia, all borrowed, our author now terminates his chapter on herpes.

Aphtha.—Our author considers this as a subject of very trivial importance.

"I have never been able," he says, "to see this disease in the mouth of the infant in the form of distinct vesicles, and am inclined to think that the appearances which have given rise to this idea of its character depend entirely on the peculiarities of the part, and that each white speck, constituting part of the disease, is produced, as the pimples of strophulus are, by a minute effusion of lymph under the delicate cuticle of the part. The peculiar delicacy of the latter in the infant, and the state of constant moisture and friction in which the tongue and other parts covered by the membranes of the mouth are kept in the infant, will readily explain why the substance of the pimple should be so soon disturbed and rubbed off, leaving that minute circle, or irregular and partly detached white crust of cuticle which distinguish the affection."—p. 265.

This disease being apt to excoriate the nurse's nipple, it is right that that part should be washed every time after the child has been suckled. To cure the excoriations, the red precipitate ointment very much diluted has been used with much advantage.

The aphtha adultorum is a distinctly vesicular disease, and appears commonly on the edges of the tongue and on the fauces. It originates in debilitated states of the system; and consequently the constitutional condition of the patient should always be attended to. Dr. Bateman's account of the aphtha anginosa concludes the chapter.

Furunculus.—Mr. Plumbe thinks that the common furunculus, or boil, differs from the true carbuncle only in degree.

"There are," he says, "two species of boils, one of which involves the cutis and cellular tissue beneath to a great extent, forming a tumour, sometimes attaining the size of a pigeon's egg; the other confined to, and only involving in the suppurative process, the substance of the cutis."—p. 276.

In the second kind, large doses of diluted sulphuric acid have been serviceable. But externally, except by the application of

leeches and poultices, he disapproves of all interference with the progress of the boil.

We now come to the author's fourth section, *on diseases marked by chronic inflammation of the vessels secreting the cuticle, producing morbid growth of this structure; constitutional causes or influence uncertain.* Under this head are comprehended lepra, psoriasis, pityriasis, ichthyosis, and warts.

"The appearance," says our author, "which lepra assumes at its commencement, is that of round red spots, elevated above the surrounding skin, and generally not larger than a split pea. If the finger be drawn over it, a degree of stiffness, or absence of the natural flexibility of the skin, is distinctly observed. In a day or two, if a minute examination be instituted, the spot is found to have a glossy hard surface, a perfect semi-transparent scale having been formed, the surface of which is smooth and polished. In a short time this scale separates; when the site which it occupied exhibits no variation of colour, but a considerable degree of roughness and irregularity. The examination of the inner surface of the separated scale enables us generally to discover, in or about its centre, a minute protuberance, considerably softer than its bulk, and which has evidently occupied a corresponding hollow or excavation in the denuded surface. If force has been used to separate the scale, a speck of blood usually occupies this excavation, and the point described as the centre of the inner surface of the scale which occupied it is also similarly discoloured. As the diseased spot enlarges, fresh scales are produced; but these are entirely dry, and do not exhibit the appearances on their inner surfaces which belong to the original scale of the incipient disease above described. Neither are they found uniformly to extend over the whole diseased spot, in the form of one continued scale; as in this state they separate partially, and in patches, their dried edges giving a whitened scurfy appearance, in some situations, where they are partially detached.

"As the number and size of the spots increase, the limb, of course, becomes gradually incased in a shield of scale; and those in the neighbourhood of joints consequently become very troublesome, producing a considerable restraint on the motion of the parts.

"There is one circumstance peculiar to this disease, which has been particularly mentioned to me by the patient, namely, a sensation of pricking, most frequently noticed a little before the separation of the first scale, when perhaps it has scarcely attained the size of a spangle. I am inclined to think this sensation the consequence of the raising up of the edges of the scale, produced by the tumefaction and elevation of the inflamed margin, and fresh growth of scale; the centre which was attached to the cutis being thus forcibly torn from such attachment. This conjecture is rendered more probable by the fact, that, when the disease is obviously subsiding, when no new scales rise up, and thrust those which were

before formed from their attachments, the pricking in question is no longer felt."—pp. 284-286.

In this disease, also, Mr. Plumbe disapproves of the division into lepra alphoides and l. nigricans; as they merely differ in degree.

"The characteristic pathological features of lepra," he says, "are sufficiently distinct and defined. The seat of the inflammatory action which constitutes it is chiefly, perhaps entirely, situated in those vessels of the cutis, whose office it is to secrete the cuticle. The nature of this action, too, is sufficiently clear; it is evidently of a chronic kind, as is proved by the minor degree of redness of the spots, compared to most other eruptions, and by the absence of tenderness or smarting. If the vessels of the cutis were all equally engaged in this action, we should have vesicles or pustules, and the secretion would not, as it now does, appear constituted entirely of morbid cuticle. Unfortunately, however, reasoning of this sort leads to no inferences which have been proved to be practically valuable; and the duties of the medical recorder consists, not in detailing successful principles or plans of treatment, but in stating that almost every kind of medicines, whether exhibited with or without a principle, have failed to be followed by any kind of advantage which could be satisfactorily attributed to their operation, and that only one or two are entitled to be considered worthy of trial, internally exhibited."

"The aqua kali puri of the London dispensatory, in doses of twenty or thirty drops, three times a-day, the hydrarg. oxym. in small doses in the form of a spirituous solution, the arsenical solution, the decoct. dulcamara, and the sulphur vapour bath, seem to have the weight of recorded facts, and results of attentive observation, decidedly in their favour as remedies for lepra."—pp. 289-291.

A case of this disease, treated with the sulphur vapour bath, to which our author had an opportunity of attending, has undergone, he informs us, a most important improvement, though the remedy had not been regularly administered.

"The disease has been existing from boyhood, and manifested but little change for the first few weeks of this treatment; but, after that time, appearances of a beneficial change began to be visible. The pricking sensation, which I have before noticed, as dependent on the formation and extrication of fresh scales from the surface, gradually diminished, and ultimately ceased to be felt. No new spots continued to make their appearance, and those already formed ceased to extend, or to be covered by scales of the thickness of the former. The margins of the larger spots continue to assume a bluish cast, and ultimately to disappear; the skin of the arm, lower part of the back, and nates, which were previously covered by scales, are, I understand, now returned to a perfectly healthy state.

"The arsenical solution, and the sulphur vapour bath, promise, if used scientifically and carefully, to become instruments of pretty uniform power in the cure of the diseases under consideration. It seems not improbable that the due and efficient administration of the former has been often interrupted by the consequences of want of circumspection, and inattention to the gradual increase of the doses, and that the extent to which it has been hitherto administered may be very considerably increased with advantage.

"The irritation of skin attending scaly diseases, generally, may be considerably diminished by frequent ablution with warm water; and, if the tenderness be not too great, gentle friction may be had recourse to. By such means, that accumulation of scales, which so encourages the lodgment of irritating secretions, will be prevented, and the latter removed almost as soon as formed. There are opinions on record, indeed, that these measures deserve the consideration of certain remedies in many cutaneous diseases."—pp. 306, 307.

The primary cause of lepra, Mr. Plumbe suspects to be a temporary debility of the system.

"Deficient energy," he says, "in the vessels of the skin, and consequent inadequacy to the production of healthy cuticle, may, I think, be fairly presumed to exist in this disease; and when the fact is taken into consideration, that the majority of cases appear under corresponding states of the constitution, we shall not be far from the truth in pronouncing the original exciting cause to be of this kind. It is too true, however, that, if this be the case, to remove the cause is not to effect the cure, since tonic medicines, with the exception of the hydr. oxym., do not seem to be possessed of much power."—pp. 294, 295.

Psoriasis.—Our author thinks this is but a variety of lepra, and consequently the name, now given to it by Dr. Willan, as it implies a kind of section, is manifestly improper. It may be called a milder form of the disease and less durable than lepra, but its remedies are the same, only they are more effectual. In a case of inveterate psoriasis, treated with arsenic in the hospital of St. Louis, in Paris,

"The arsenical solution," says Mr. Plumbe, "was commenced in doses of two drops exhibited twice a-day. The case was attentively watched, and the dose gradually increased, without any untoward symptom occurring, for the space of two months; at the end of which period, no less than thirty-eight drops were exhibited for each dose. At this time, nausea and sickness being complained of, the medicine was suspended; a very important and rapid change in the state of the disease having occurred within the last few days. Three days after, the severe colicy pains commonly following the exhibition of the medicine, even in much smaller doses, if less gradually administered, came on, followed by cold perspirations and

great constitutional disorder. Opiates and cordials soon relieved these symptoms; and so satisfied was the patient of the good effects of the treatment, that, though a trifling degree only of the disease remained, he was anxious to return to the use of the medicine. The case was ultimately, though of years' standing, completely cured by adhering to the same plan."—pp. 301, 302.

The chapter on psoriasis concludes with a case treated with the sulphur vapour bath at Mr. Green's establishment in Bury street, and with some extracts from various periodical journals, for the varieties of psoriasis, and with remarks on the correct description of Lepra given in Leviticus. But on none of those do we think it necessary to enlarge.

Mr. Plumbe now treats of pityriasis.

"Scurfy exfoliations of the cuticle simply," he observes, "may be said to constitute the disease, and no appearance of active inflammation ever occurs during its continuance. It now and then, though very rarely, is accompanied with redness and slight sensations of itching; and when the scurf is rubbed off in these cases, the cuticle remaining is evidently exceedingly delicate.

"The most common situation of scurfy accumulation is the hairy scalp, and when situated here, it is familiarly designated dandriff. This form of the affection is most frequent in the infant; but adult persons of dark complexions, and those of native Indian extraction, are particularly liable to it, though it is in them generally removed with facility.

"It may be considered, generally, as indicating debilitated action of the vessels secreting the cuticle, by which a delicate and ill-formed production of this substance is effected. The causes of this local debility of vessels are sometimes constitutional, and in adults it often follows great and exhausting exertions, and consequent debility of system. When this state of things is manifest, of course constitutional remedies of a tonic kind should be had recourse to. The exhibition of bark, a better mode of living, and less labour, the use of cold sea bathing, &c., constitute what is usually required under such circumstances.

"Like psoriasis and lepra, it sometimes continues after the causes originally producing it have ceased to exist; in which case, supposing the cause to have been debility, as above alluded to, which may subsequently have been removed, local applications form the chief grounds of dependence. The very best among these is diluted spirit, in which a few grains of the acetate of zinc have been dissolved. With this lotion the part affected may be bathed morning and evening with a soft sponge, the patient availing himself of the sedative effects of the evaporation of the spirit from the surface.

"Where the skin is originally of a preternaturally irritable kind, the scales may be thicker, and much itching may prevail; in which case it may, perhaps, be advisable to employ the warm or sulphur

vapour bath, as recommended in the treatment of psoriasis. Under such circumstances, indeed, pityriasis approximates very nearly to the milder cases of this affection."—pp. 317-319.

Several varieties of this disease have been mentioned, but only, our author thinks, with the effect of confusing a subject of itself very simple. As connected with pityriasis, he now gives us a description of pellagra, a disease endemic to the plains of Lombardy, but which is all borrowed from Dr. Holland.

"It may, perhaps," he observes, "be correctly defined a species of psoriasis, aggravated by inattention to cleanliness, low living, and extreme poverty; the local cutaneous affection obtaining its only variations in character from this disease, from the irritation attending continued exposure to the heat of the sun."—pp. 329, 330.

The next object of consideration is ichthyosis, or the fish skin disease.

"It usually makes its first appearance in a form unequivocally showing its origin in a chronic inflammatory action of the vessels producing the cuticle. A morbid thickening, with a dry and harsh state of this covering, is the first circumstance worthy of observation in the disease.

"It is a formation which is not analogous to any thing that is often seen but the common wart of old standing, and even this resemblance exists only in structure, the connexion of the latter with the cutis being considerably closer, and its separation effected with much more difficulty and pain. The sensation on drawing the finger along the diseased surface is precisely similar to that occurring from this proceeding on the surface of the larger and old standing warts."—pp. 330-332.

Its causes are obscure; but in some instances it has been found to be hereditary.

"When the disease," says Mr. Plumbe, "occurs under such circumstances, it is more than probable that medicinal treatment of every kind will fail to produce any alteration, depending as it does on the original formation of the skin. When only local, and of small extent, remedial measures may be taken, with a fair prospect of success."

"I have had," he continues, "two opportunities recently of submitting this disease to the combined influence of pressure and the cold lotion. Both these were situated on the leg, and as no disorder of the system or digestive organs could be traced, internal medicines were not had recourse to. Considering inordinate action of the vessels on the surface to be manifested, both by the heat which was present, and the rapid growth of the excrescence, it appeared that the *modus operandi* of these measures was well adapted to the cases. Adhesive straps were applied as tightly as could be

borne with comfort over the whole of the diseased part, extending a little above and below it, and these were supported by a bandage. The latter was kept constantly wetted with the lotion, and at the end of four or five days removed. At this period the excrescence was found liberated from its attachment to the cutis, and came off in large pieces, nearly through its whole extent, exposing a white and ill-formed cuticle, which might be scraped off in great quantities without pain. By perseverance in the same plan of treatment, the cuticle gradually assumed a strong and healthy state, and a complete cure was in both cases ultimately effected."—pp. 333, 334.

The fourth section is finished with some remarks on warts and corns. When the former occur on the hands, the most expeditious mode of removing them, according to our author, is as follows :—

"A small portion of the empl. lyttæ is to be laid on the crown of the wart, and retained in this situation by adhesive plaster: in a day or two the substance of the wart is in a soft and moistened state, and a little ring of vesication appears round its root. The wart may in this state be picked or cut off level with the cutis, and the lunar caustic, or a minute portion of sulphuric acid, applied directly to the surface, from which it has grown. It rarely happens, if this plan be followed, that any further morbid growth takes place."—pp. 336, 337.

The fifth section is, *on diseases of a mixed character essentially dependent on active inflammation, with which the constitution is not necessarily connected.*

"In speaking," says our author, "of diseases of a mixed character, it is intended merely to apply this phrase to their local appearances. Impetigo, in different cases and their stages, exhibits vesicles, pustules, and regularly-formed scales, very much resembling those of psoriasis. Vesicles and pustules also alike characterize scabies and eczema."—p. 338.

These are the diseases treated of by Mr. Plumbe in this section. Of the first, impetigo, the description is nearly the same as the one given by Willan and Bateman.

"It rarely," he says, "comes under the eye of the medical observer at its first commencement; and I am inclined to think, that, at this period, the term pustule is improperly applied to its chief feature, the fluid which the vesicles contain being transparent, though the change to opacity takes place in a few hours. The vesicles are sometimes broken at this period, when the fluid which they contain concretes on the edges of the little excavation which they occupied; and if the part be at this time minutely examined, the excavation will be found lined with this incrustation, while other vesicles are forming by the side. In this way the disease extends in a circular or other form, till a sufficient abrasion of surface is produced to furnish the materials of a scab.

"In the treatment of impetigo, the frequent removal of the diseased secretion has never been considered of sufficient importance: the benefit of this step, if carried into effect by frequent ablution of the part with warm water, is incalculable. By this plan, in conjunction with the exhibition of simple alteratives, entirely rejecting any thing in the shape of ointments, or other greasy applications, the disease will be often readily subdued. The part may be kept in a state of moisture at other times, by covering it with oil skin, or by the application of soft linen wetted in the liq. plumb. acet. dil.

"If these means prove inefficacious, the Harrogate waters, or the internal exhibition of sulphur in any other form, are recommended. Plummer's pill, the decoction of dulcamara, &c. present other means of obtaining success.

"Cold, particularly in the local varieties of the disease, is of the greatest importance. I have had reason, moreover, often to suppose that greasy applications, even of the simplest kind, are productive of increased irritation."—pp. 345-347.

Speaking of the hydrocyanic acid, Mr. Plumbe observes,

"When the diseased surface has been diligently cleared of the scabby secretions, a lotion formed of this fluid, diluted very largely, and to which a little alcohol has been added, is a useful application in cases where the disease is not extensive. In the present state of our knowledge respecting its power, however, it would, perhaps, not be safe to apply it to a whole limb, or to an extensively diseased surface on the trunk. It is much more efficacious in subduing the marks of irritation which exist on and surrounding the diseased spot, than any other application which I know of, if care be taken to clear away the secretions, so as to admit it directly to the diseased surface; but if the latter point be not attended to, its superiority is not so distinctly marked. It sometimes rapidly removes every vestige of the disease, but is often followed by unhealthy skin; in which case, when the patient begins to relax in its application, the disease is apt to return.

"The grand and predominant features of impetigo," we are told, "are extreme irritation and active inflammatory action, accompanied or followed by a proportionate degree of relaxation of the vessels of the part involved. The objects in view, therefore, should be, first, to diminish such irritation; and, secondly, to supply the loss of tone which the vessels have sustained. It is evident, that mere sedative applications are not possessed of these properties conjointly, and hence arises the temporary effect only by which they are followed. The desiderata evidently consist of means which will at once relieve the turgescence and irritation, and correct the relaxed state of the vessels alluded to. It is upon these principles that the sulphur vapour bath acts in removing the disease, and its powers in such cases are unquestionable."—pp. 347-349.

Scabies.—By extracting Mr. Plumbe's description of scabies, we do not imagine we could add any thing to the information of our readers, and shall therefore confine ourselves to an extract upon a disputed point, and to a remark or two on the treatment of the disease.

"The existence," he observes, "of an insect in some of the vesicles and pustules of itch has been discovered, in repeated instances, by the assistance of good glasses, and it is therefore supposed, with apparent good reason, that the disease is the mere result of their operations in the skin. On the other hand, however, it has been maintained, that such insects are the consequences rather than the cause of the disease, and that they are not found in the majority of cases where inquiry has been instituted. The first of these opinions prevailed very generally until the publication of Dr. Bateman's work, and he has expressed his suspicions that the insect is not to be found in all cases of the disease. He brings forward the authority of Dr. Heberden, and of Baker and Canton, the two latter of whom had the advantage of great experience in the use of the microscope, in support of his opinion. Since Dr. Bateman's work was published, the subject has been several times canvassed by French pathologists; among whom, Lugol, Mourouval, and Dr. Suriray, of Havre, contend for the non-existence of the insect; while the experiments of Dr. Gales, the well known inventor of sulphur fumigations, seem quite conclusive in favour of the original opinion. The three former have by no means adduced that weight of evidence which Dr. Gales' statement contains, and it is more than probable, that the superior opportunities of inquiry which the situation of the latter gave him, would enable him to arrive nearer the truth.

"The hospital of St. Louis, in which Dr. Gales was a long time resident, constantly contains a large number of cases of itch: he states, that he has examined some hundreds of the insects in question: his description of which exactly corresponds with that given by Linnæus. He has succeeded in producing the disease by confining the insect on his own skin repeatedly: and his experiments have been witnessed by some of the most eminent medical characters in Paris, who have been satisfied with the manner in which he has conducted, and with the conclusions which he has drawn from them."—pp. 353-355.

Sulphur, it is well known, is the specific remedy of this disorder.

"The most common form," says Mr. Plumbe, "in which it is employed in this country is that of ointment; but the recent importation of the French fumigating baths has afforded us some opportunities of avoiding the unpleasantness of this plan, and though somewhat more tedious in bringing about a cure, they are entitled to preference on account of the superior degree of cleanliness the patient is enabled to observe during the treatment."—p. 356.

This mode of treating the disease, from being at first comparatively rude and unpleasant, is now become, in so far as regards the patient's feelings, an absolute luxury.

Eczema.—In most instances this is the simple effect of heat applied to the skin.

"This affection," says our author, "has obtained in its more formidable form, as produced by mercury, the attention of many experienced observers, from whose published remarks it appears, that though attended with much local irritation, and a copious discharge from almost every part of the surface of the body, it is generally unattended with danger. It subsides according to the violence and extent of the eruption at its commencement, apparently uninfluenced by medical treatment in the space of from three weeks to two months.

"The heat of the sun is, in delicate and irritable skins, capable of producing its more insignificant forms on the hands, neck, face, and other exposed parts in a very short period; and consequently, such forms prevail most among field labourers in the time of harvest. With the same state of skin, it may of course be produced by the application of heat in any other way."—pp. 359, 360.

It is in general a distinctly vesicular disease, to the various appearances of which, different names have, Mr. Plumbe thinks, been very unnecessarily given.

"From some experiments," he observes, "which I have instituted, I have no doubt that the minute vesicular form which the disease assumes, when occurring from exposure to the sun, is materially dependent on the degree of heat applied, that a blistered state of skin would occur if the heat was increased, while a minor degree of the latter would only be followed by erythematous redness: that it is therefore to be considered rather as an accidental injury, and treated on surgical principles, in a manner similar to a slight burn or scald, than to be spoken of as a disease. It is moreover a state of parts, which the abstraction of heat, by cooling sedative washes, even though the irritation may be great, will enable the efforts of nature to correct in a few hours."—p. 361.

In this disease the use of greasy applications cannot be too much condemned.

So much has been written upon eczema, produced by mercury, that we think it would be quite a work of supererogation to say any thing of it here; especially as our author's account of it is entirely borrowed. In its treatment he speaks highly of the warm bath, used twice a-day, for three or four successive days.

In a part of his work, which he has styled, concluding remarks, Mr. Plumbe justifies himself for having passed over certain cutaneous diseases without mention. The first of these

are constitutional diseases, such as small pox, measles, scarlatina, varicella, &c., which, besides, have been treated of at great length by authors of established reputation and talent. The others are erysipelas, elephantiasis, erythema, and roseola, venereal eruptions and lupus; none of which can be said, strictly speaking, to be cutaneous diseases, as other parts are always more or less implicated.

We have been so full in our analytical review of Mr. Plumbe's book, that we have left to ourselves but little room to discuss the question of its merits. The new arrangement, adopted by the author, has no doubt given an air of originality to the work, and has thrown over an obscure subject something like novelty, but, if we except a few remarks on the physiology of the skin, and on the appearances and treatment of his favourite porrigo, we really think that our author has added little to the labours of his predecessors; but he has compiled from them with care and ingenuity: and in his examinations of their doctrines he has shown himself to be a candid and judicious critic. Many of his decriptions, also, where he has trusted to his own powers, prove that he is a patient and correct observer of nature. He has shown, we think, a needless eagerness to explain every thing,—consequently some of his reasons for occurrences are rather far fetched. He writes in a diffuse, and sometimes, obscure style, and we observe that a few grammatical errors have escaped him. Had he known, indeed, something more of English composition, or could he have attained to the chaste and classic elegance of Bateman, his work would have been more admired, and would have been much more conducive to his fame. As it is, however, it has merit; but still, as a whole, it is much inferior to the work of Bateman.

ART. II. *Elementary System of Physiology.* By JOHN BOSTOCK, M.D., &c. &c. 8vo. Vol. I. pp. 493. London, 1824.

The vigour and success with which modern experimentalists have prosecuted the study of physiology, appear to have had the effect of attracting an unusual degree of attention to it, on the part of the professional public. Other circumstances have no doubt contributed to the same end, and none so much as the conviction now felt and expressed more warmly than ever, that it forms the only stable basis on which the fabric of practical

medicine can be elevated. But independent of these considerations which are accidental, and in some degree perhaps only temporary, the natural progress of the science, brought about by the lapse of years, has created a necessity for the revision of many, even of the fundamental doctrines, and for such modifications in the methods of arrangement as are calculated to embrace and to generalize the multitude of new facts which have been accumulated.

This increased attention has naturally called forth the activity of systematic writers, so that besides translations from foreign authors, we are now, for the first time, presented with a systematic treatise on modern physiology in our own language. There are two principal methods in which the elementary exposition of any science may be performed: in the one, the writer confines himself to a statement of the most important facts, and of the general principles or laws deducible from them: in the other, without altogether neglecting this part of his subject, he undertakes to communicate more or less of its previous history, so as to give a general view of the facts discovered, and the theoretical ideas entertained in the various stages of its progress. The latter is the plan which Dr. Bostock has adopted, and as appears to us, judiciously; for although it is probable that the former, when executed in a masterly manner, has a more direct tendency to enlarge the boundaries of the science, yet to the student, the latter affords an equal amount of information in a much more acceptable form, and furnishes him with a kind of knowledge, which though perhaps not essential, is highly useful; and which he would be compelled himself to seek for at other sources, with the expense of much time and difficulty.

It is proper, however, that Dr. Bostock should be allowed to speak for himself. After a definition of what he means by the term Physiology, and a concise, but clear sketch of its history, from Hippocrates, downwards, he proposes the plan of his work, and gives his reasons for the one he has adopted. And here, freely availing ourselves of his invitation of criticism, we feel called upon to state our objections to it.

"The more correct opinions of the present day," says Dr. Bostock, after alluding to some former ones, "for which we are in a great measure indebted to the sagacity of Haller, have led us to conclude, that all the appropriate actions of the living system may be referred to the two classes of motion and feeling; and that these depend upon two principles inherent in the body, contractility and sensibility—the one seated in the muscular fibre, the other in nervous matter. To the action of one or other of these principles every corporeal change may be ultimately referred; and it is through

their immediate operation that all the functions are performed. Hence we have a foundation for an arrangement of the functions into contractile and sensitive, to which I propose to adhere in the following work; and for reasons which will be hereafter more fully detailed, I shall begin with the former class. The functions which belong to this division are, the circulation of the blood, respiration, animal temperature, secretion, digestion, assimilation, absorption, and generation." "The other great division, the sensitive, comprehends the five senses; and besides these there are other classes of sensations which appear equally specific, although from the mode in which they operate, or the organ by means of which they are exercised, their distinct nature has not been so generally recognized. Of these some of the most important are the sensation that attends muscular contraction, that of heat and cold, and that of hunger.—p. 14, 15, 16.

This division appears to us to rest upon an erroneous basis: independent of the gratuitous assumption, which, contrary to known facts, would limit contractility to the muscular fibre*; it is undoubtedly erroneous to class that property in the same line with the sensibility which is peculiar to the nervous matter. Contractility is a simple and elementary property, whilst sensibility, as it exists in the nervous system, is a function, and the result of the action of one or more sets of organs. If, as Dr. Bostock proposes, we were to consider contractility as inseparable from muscularity, what are we to think of the contractile action of those parts of the higher animals, of the whole of many of the lower ones, and of all vegetables, in which the presence of muscular fibre is not to be detected? Are they the less vital in their nature, or are they to be excluded from consideration in arranging the general principles applicable to the particular physiology of every species of living being? By a reference to this standard, the fallacy of his division at once displays itself; for surely that principle of arrangement cannot be admitted as valid, which, though satisfactory as far as regards the functions of a single animal species, is incompatible with a more extended view of nature. When we say that is satisfactory as regards one species, it is perhaps more than it actually deserves; the separation between the two classes of functions he has proposed is far from being decided or marked by the hand of nature. Of his contractile functions, three or four at least, respiration, temperature, secretion, and digestion, are as much under the influence and the result of the action of the nervous, as of the muscular system.

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* So far is contractility from being confined to the muscular, that its presence has been demonstrated in the nervous fibre.

Nothing, in fact, could afford a better illustration of the truth of the maxim, that arbitrary division is not analysis, a mistake apt to be made in the attempt to be original. Dr. Bostock's proceeding in this respect is the more to be regretted, as we do not think he has been successful in proving that the arrangement of the functions commonly adopted, is so objectionable as to be inferior to the one he has brought forward. The contrary we believe to be the truth; it cannot be denied, indeed, that to all there are objections, and that there are, and must be, many phenomena not easily to be included within any that could be suggested. The principle of the division, however, which though perhaps not at first proposed, was most admirably elucidated by Bichât, seems at once more philosophical and more natural; and the division itself more adapted to practical purposes. Various modifications have been proposed, and various changes in the nomenclature; in all, the same general idea of the separation of the functions into those peculiar to the individual, and those by which the relations with the external world is maintained, may be recognized. Cuvier has still farther perfected this division, by separating the generative functions from those peculiar to the individual. Dr. Bostock is of opinion that this *mode* of arrangement is not founded on any natural principle of classification, and that it presents the practical objection of throwing almost all the functions into one of the divisions. On the former point, as we have already said, we differ from him altogether, and must leave our readers to form their own opinions: as to the latter, the objection is more apparent than real, for the subdivision of the classes removes the principal difficulties; and it is besides, in a great degree, obviated by the modification proposed by Cuvier.

Membrane.—Dr. Bostock commences by a description of the composition and structure of what he calls membrane, a term, however, with him more indefinite than in its ordinary acceptation. That this is the case, will be evident from his own language.

"It constitutes the main bulk of the bones, and determines their figure." "Membrane also enters into the structure of muscles, not only affording them an external sheath, in which they are each of them inclosed, but the same matter is also interposed between their fibres, &c." "The membranous matter composes very nearly the whole bulk of tendons, by which the muscles are attached to the bones: of the ligaments by which the bones and other solid parts are connected together; and of the cartilages which form the basis of many parts of the body, &c." "It also enters very largely into the composition of the hair, the nails, and other

similar parts connected with the surface. It likewise composes what is called the cellular texture." "Membranous matter is the chief ingredient in the glands, both those which are attached to the absorbent system, and those which are appropriated to the office of secretion." "The pouches, or sacs, which are found in different parts of the body, such as the stomach and the bladder, are almost entirely composed of membrane; and what perhaps must be regarded as the most important of all, the purposes which it serves; this substance composes the principal part of the tubes, or vessels, with which the animal body is so plentifully furnished." —pp. 22, 23.

The apparent confusion arising from this manner of considering the subject, may be in some degree removed by the statement which Dr. Bostock makes, that with him, the term membrane, includes not only what has been usually called such, but the whole of the substance which possesses the same mechanical structure, and the same chemical properties. But even with this explanation, we think that it can hardly be considered warrantable to depart so far from the established ideas on this point, and that, as far as we can perceive, without any adequate advantage. We are inclined to believe that Dr. Bostock has been induced to do so by attaching an undue degree of importance to an accordance in their chemical properties among the substances he has thus classified: in fact, there is no other ground on which it would be possible to approximate substances so opposite as the soft part of the bones, cartilage, skin, hair, tendons, &c.: even in this case, it is probable that a more perfect system of animal chemistry might enable us to detect differences, which at present escape unnoticed.

The present volume of Dr. Bostock's work (which we are given to understand another will complete) contains six chapters: of these, the first, as before mentioned, treats of membrane; the second of bone; the third of muscle; the fourth of the nervous system; the fifth of the circulation; and the sixth of the blood. This arrangement will serve to show the deficiences of all classifications of physiological subjects hitherto proposed, and the particular inconveniences of that adopted by Dr. Bostock. As a proof of the first, the cellular membrane, which is nearly equivalent to what Dr. Bostock calls "membrane," finds no place in the classifications commonly employed, so that in systematic works on physiology, the history of its properties and uses is either entirely neglected, or it is introduced violently, and without any natural connection with the remaining parts of the scheme. The objections to Dr. Bostock's plan we have already mentioned, but an addi-

tional one may be found in the situation he has assigned to the physiology of bone; its natural position would evidently be as a part of the history of the functions establishing a communication with the external world, on one of which, locomotion, it is clearly dependent; as we find it in Dr. Bostock's view of the subject, it might certainly be placed in any other position than that it occupies, without at all suffering by the change.

It will, perhaps, be more satisfactory to give some idea of the manner in which Dr. Bostock has treated a single subject, than to take more imperfect notice of several, and for this purpose we shall select his account of the nervous system, although the present volume does not contain some parts of its physiology; a division of the subject we are by no means disposed to commend.

This chapter comprises four sections:—1. A description of the nervous system: 2. Vital powers of the nervous system, and their mode of action: 3. Use of the nervous system: 4. Connexion between the nervous and muscular systems. We shall begin with the second.

Vital Powers of the Nervous System.—"When we consider the brain and nerves," says Dr. Bostock, "our first inquiry must be, what properties they possess in common with the other organs of the body, and what powers they have that are peculiar to themselves." "Of the two specific powers that distinguish living from dead matter, spontaneous motion and sensation, the first is confined entirely to the muscles, while the latter is equally confined to the brain and nerves. When a nerve is acted upon in such a manner as that its appropriate power is excited, motion is not necessarily produced, nor any other visible change, but the animal feels." "We conclude therefore, that it is the office of the nervous system to produce sensation; but the way in which this is accomplished, or the succession of changes by which it is preceded, we shall find it extremely difficult to ascertain. With respect to the relation which the different parts bear to each other, it has been generally supposed that the brain is the centre of the nervous system, or that part to which all the others are subservient, and that the nerves receive impressions from external objects, and transmit these impressions to the brain, where they become sensible to the mind, constituting perceptions."—pp. 240-242.

Dr. Bostock acknowledges that in these passages he employs the term "sensation," and "perception," in a sense somewhat different from their ordinary acceptation. This seems to be particularly the case with "sensation;" as it is usually applied, it comprehends both the action of a nerve, and the subsequent state or action of the brain, by which we perceive or become conscious of the first: a sensation, in ordinary physiological lan-

guage, implies perception. Dr. Bostock, if we understand his meaning, confines the term to the action of the nerve. This manner of proceeding appears to be calculated to create inextricable confusion.

"Assuming it therefore as an established fact, that the brain and nerves are the primary seat of sensibility, we must inquire into the mode by which this faculty operates. The operation we shall find to be of two kinds: the first depending upon the action of external bodies on the nervous system; the second upon the re-action of the nervous system itself on some of the corporeal organs. The body is furnished with certain instruments, denominated organs of sense, consisting essentially of two parts, a peculiar conformation of an organized substance, which is specifically adapted to receive and modify certain impressions, and a quantity of nervous matter suitably disposed for the reception of the impressions after they have been thus modified. The nervous matter that belongs to the organs of sense is connected by nerves to the brain, and these nerves possess the power of conveying the impressions along their course to this organ, where they produce perceptions. In this operation there are three distinct stages, the original impression on the sentient nervous extremities, the transmission of the sensation along the trunk of the nerve, and the reception of it by the brain: and it may be laid down as a point, proved by the most ample deduction of facts, that an external impression cannot be perceived by the mind, without going through the successive steps of this process."—pp. 245, 246.

These circumstances Dr. Bostock illustrates by a reference to the sense of touch and to vision, in which it is comparatively easy to demonstrate the existence of these three stages.

"The second mode in which the nervous system operates, is by its re-action on some of the organs of the body, an operation which, with respect to the succession of events, is the reverse of the one which has been described above. Of the actions of this description, one of the most important to our existence, and the most frequently exercised, is the faculty of voluntary motion. Here the affection originates in the brain, in which some change takes place; this is transmitted down the nerve into the muscle, where an effect is produced on the fibre, which causes it to contract; and in this, as in the former case, all the three stages are equally essential." "In this instance, in consequence of the space which intervenes between the parts where the action commences and terminates, we have the most ample means of observing the necessity of the integrity of the nerve as the medium of communication. If the nerve be divided in its course we may exert volition, and produce the necessary change in the brain, but no motion will ensue in the muscle; at the same time our own feelings will not indicate to us that any thing has occurred out of the ordinary course of events, and we are only aware of the defect by finding ourselves unable to produce the de-

sired contraction. And we have it in our power to prove, that in this case the defect does not depend upon the morbid condition of the muscle, because if we irritate the nerve just below the point where it is divided, we find that the muscle will contract, in the same manner as if a similar kind of irritation had been applied to the nerve in its entire state. We may also extend the same kind of trial to the brain, for by irritating the upper part of the nerve above its division, we shall have a sensation produced in the brain, similar to what would have followed the application of the same stimulus to the remote extremity of the nerve."—pp. 248, 249.

Dr. Bostock next notices the principal hypotheses of the mode in which nerves act. He particularizes three: the hypothesis of the animal spirits, popularly ascribed to Descartes; the hypothesis, of vibrations detailed and embellished by Hartley; and the more modern one of electricity, which, though warmly advocated by a few men of talent, is very unsatisfactory. Although this seems to be very much the opinion of Dr. Bostock, he defers the complete explanation of the hypothesis until he has an opportunity of considering the facts on which it rests, in connexion with the functions of secretion and digestion.

The uses of the nervous system may, according to Dr. Bostock, be resolved into two; first, to maintain our connexion with the external world by receiving external impressions, and producing voluntary motions; and secondly, to unite the different parts of the animal frame into one whole. By a reference to this latter use of the nervous system, Dr. Bostock explains the occurrence of sympathies.

"The information," says he, "which we gain by investigating the anatomy of different kinds of animals, and comparing them with the human subject, confirms and illustrates this idea of the use of the nervous system. It is remarked by Blumenbach, that in the cold-blooded animals, where the size of the brain bears only a small proportion to that of the nerves proceeding from it, there is much less sympathy between the different organs and functions of the body, while, at the same time, each separate part possesses a greater share of individual vitality. This we see exemplified in the length of time during which life remains attached to their limbs when divided from the body, the power which some of them possess of re-producing parts that have been removed; and, as we descend lower in the scale of organization, the still more extraordinary power of being multiplied, like vegetables, by mechanical division."—pp. 260, 261.

"The general result of our experience leads us to conclude that there is a common centre of perception, and that in the human species it exists exclusively in the brain." "The proof of the existence of a common sensorium, depends upon the facts that have been referred to above, where impressions made upon an organ of

sense are not followed by a perception, provided the nervous communication between the organ and the brain be not destroyed or injured, and the same conclusion seems to be confirmed by a series of facts the reverse of these, when an effect has been produced upon the brain, similar, as we may suppose, to one which had, on some former occasion, been transmitted to it from an organ of sense, it has excited the idea of an external impression, although the organ of sense may have been destroyed."—p. 262.

Dr. Bostock admits that in the lower orders of animals, the sensorium is more extended, the spinal cord participating in the functions of the brain, or even assuming its place; but he doubts whether, in this case, the animal possesses what can be properly called perception, and whether the sole object of its nervous system may not be to convey impressions from one part to another, which are necessary for the functions of the animal, but which do not excite any ideas of consciousness—p. 263.

After a description of the probable share which the brain performs in the function of volition, and a short notice of the hypothetical views of Descartes and others, on the supposed centre of sensation, Dr. Bostock proceeds to the modern inquiries into the functions of individual parts of the nervous system: this would probably have been the most suitable situation, in which to have introduced the subject of craniology: his mode of arrangement, however, has led him to do otherwise, for he has separated the intellectual, from what he has called, the sensitive functions.

"The investigation of the particular seat of nervous sensibility, has been diligently prosecuted by some of the modern anatomists, and they have undoubtedly proceeded upon a more correct plan, if they have not been more successful in their result. They have not been satisfied with mere conjecture, but, in order to discover this supposed seat of sensibility, they have adopted two modes of inquiry."

The first of these consists in the observation of the effects of injury or disease: the second in the endeavour to trace up the nerves of the different organs of sense to one spot within the brain, which might be considered as their origin. Neither of these methods has, however, led to any positive results in connection with the views for the prosecution of which they were employed, though in other respects they have offered much curious and valuable information.

Modern physiologists have, in general, admitted the necessity of supposing that distinct functions are performed by the different parts of the nervous system, though very few of them coincide in the distribution they make in relation with this idea. Dr. Bostock has alluded to the most important of these divisions,

which must all, however, be considered as in a great degree hypothetical. An exception, however, must be made in favour of the division of the nerves established by Mr. Bell, which is fully proved, and rests upon most decisive experiments.

The nature of the connection between the muscular and nervous systems, has been fully illustrated by Dr. Bostock, and may be considered as affording a very favourable specimen of the manner in which he has executed the more strictly physiological parts of his Treatise.

"The point at issue," says Dr. Bostock, "may be thus stated. When a stimulant acts upon a muscular fibre, so as to produce contraction, does it act immediately upon the fibre itself, or does it not always act through the intervention of a nerve?"

Haller was the first experimentally to establish that the intervention of the nervous system was not essential, and to lay the foundation of the theory of inherent muscular irritability, which has since been so generally received, and which appears to receive additional support from every advance made in physiological science. His theory gave rise to much controversy, particularly with Whytt, and even at the present day, it cannot be concealed, that it is denied and misunderstood by many eminent individuals.

"The great argument of Haller, was an appeal to the anatomical structure and obvious powers of the animal body. He made a distinction between the contractile and the sensitive organs, and he endeavoured to point out to what parts of the system these terms were respectively applicable. He pointed out some which were extremely contractile, but were only scantily supplied with nerves, and it was found generally, that the contractility of part did not bear any ratio to their sensibility, or to the quantity of nerves sent to them. In the second place it was urged as a powerful argument in favour of the Hallerian doctrine, that muscular parts remain contractile for a long time after they are removed from the body, and when their communication with the brain is of course destroyed."

"A third set of facts, which were supposed to be still more in favour of his doctrine, was brought forward by Haller, consisting of the accounts of fœtuses that were born with imperfect brains, or even altogether without heads, and yet had grown to their full size in the uterus, and after birth exhibited many marks of contractility."

"In the fourth place, the Hallerian doctrine has been supposed by some physiologists to receive very powerful support from the constitution of the lower classes of animals, such as the actiniæ, and others of the larger zoophytes, which are of a considerable size, and are endowed with a great degree of contractile power, yet in which the most minute researches have not been able to detect a nervous system."

"A fifth argument has been derived from the order of time, in which the different parts of the body come into existence and acquire their full powers."—"The contractions of the heart proceed with perfect regularity, long before we can trace any sign of the operations of the nervous system, and we find a great variety of involuntary muscular motions performed in the most perfect manner immediately after birth, while it seems necessary that a considerable length of time should elapse before any of the nervous functions are capable of being exercised."—pp. 293-297.

Besides replying to the reasoning of Haller, the neurologists employed direct arguments in support of their own experiments. —"That," says Dr. Bostock, "which was brought forwards with the most confidence, was derived from experiments made with artificial stimulants, the object of which was to show that in a great number of the most unequivocal cases, they act upon the muscles through the intervention of the nerves."———

"But the facts which have been generally thought the most decisive against Haller are those in which we observe the muscular power to be affected by mental operations, such as the passions; and this is observed to be especially the case with respect to the heart, the organ which had been selected by the Hallerians, as one that acted independently of the nervous power, and was even thought to be entirely without nerves." "Other considerations of less weight, or founded upon less certain grounds, have been urged by the neurologists, but what I have stated seems to me to constitute the most important part of their reasoning, and so convincing did it appear, that their hypothesis has been continually gaining ground, until it came to be almost universally adopted."—pp. 303-3 07.

This hypothesis was still farther confirmed by the experiments of Le Gallois, and it was not until Dr. W. Philip, in the enquiry, which has acquired him a well merited reputation, had shewn their fallacy, that the Hallerian doctrine was re-established so firmly, that we may be permitted to believe that it will not be readily disturbed in future. The legitimate result deducible from the whole of the controversy may be stated to be, that in the voluntary muscles, the action of the nervous system must be considered not as the immediate cause of contractility, but merely as its legitimate and ordinary stimulant; whilst in the involuntary muscles, it is merely capable of exerting a certain degree of influence over their functions, without having any pretensions to be considered either as the source of contractility, or as their ordinary stimulant.

We must here conclude our extracts; the above will suffice to give some idea of the manner in which Dr. Bostock has

treated his subject. We have already stated the objections to which we conceive his arrangement liable; but it would be unjust not to add that he has in general given a very complete view of the most prominent doctrines on physiological subjects, with the facts and arguments on each side, and such an estimate of their relative value as is calculated to be of much assistance to the student: his style is uniformly clear and correct, excepting perhaps when he sets a meaning on a few terms different from that in which they are commonly received. He has devoted a considerable space to the chemical parts of his subject, and it is easy to see that this has been a favourite point, and one with which he is perfectly familiar.

ART. III. *Recueil de Memoires, consultations et rapports sur divers objets de Medicine legale,* par M. F. CHAUSSIER. Paris, 1824. 8vo. pp. 544.

Though of late we have so repeatedly taken up the subject of Forensic Medicine, we hope, from our examination of M. Chaussier's book, to form both an interesting and a useful article. The remainder of Dr. Beck's admirable work will soon come before us, from the English press, with notes by Mr. Dunlop, of Edinburgh. M. Chaussier is, we believe, a veteran practitioner, yet his work is written with all the vigour, and animation of youthful genius. It is divided into three parts. In the first, he considers in what manner we should proceed in the opening of dead bodies, those especially, which are the object of judicial examination. In the second, he has collected several judicial reports, of remarkable or celebrated cases, to which he has added some observations and remarks on the omissions, errors, negligences, obscurities, and faults of composition and reasoning, which are occasionally found in them. In the third, M. Chaussier enters on the medico-legal consideration of ecchymosis, sugillation, contusion, and lividities.

Medico-Legal Dissection.

He begins his work with some eloquent observations on the comparative appearances of the living and the dead body, and then criticises the mode commonly employed in the anatomical examination of the latter, in medico-forensic cases. With these we must not interfere, but we shall give his general rules for the opening of dead bodies.

"As the examination and opening of a dead body," says M. Chaussier, "may, when it is required by the magistrate, affect public tranquillity, social order, and the honour and life of citizens, nothing should be neglected in these proceedings to arrive at truth; and as the dissections employed have no other object but to see, to see well, to know and make known the state of parts, and the degree and nature of their alterations, every thing should be directed to this end, and be determined by certain motives of utility, and may be referred to some general and precise rules.

"1. We should never make, on the dead body, any cut or incision which is useless or foreign to the object of research.

"2. The cuts or incisions necessary for opening the cavities of the bowels, should be made so as to discover the bowels in their greatest extent, and without altering their form, situation, or actual state.

"3. They should not interfere with the bowels which are contained in these cavities, nor open the large veins.

"4. Should there be one or more wounds, which penetrate into the cavity of a bowel, we introduce the finger into them, as it, according to Pavé, *is more to be depended upon than any other instrument;* or we introduce gently and cautiously a blunt probe, or a flexible bougie of elastic varnish, to ascertain their depth and direction; and in this case the incisions necessary for opening these cavities should be made on one side, and at some distance from the wounds, in order that their form and extent may be preserved.

"5. We should never break bones, nor tear soft parts, but should divide them with a neat cut.

"6. We should, as much as possible, preserve the general form of the body, and take particular care not to alter the face.

"7. In case of a judicial examination, we should never remove or carry away any part of the body, without mentioning it in the report.

"8. We ought not, as some do, to restrict ourselves to the examination of the wounded part, and still less to the mere external inspection of the body. There may, in fact, exist in those cavities of bowels which have not been examined deep-seated alterations of long standing, which became mortal at the moment of the quarrel, or increased the severity of the wound. To be enabled, therefore, to give a sure opinion, and to furnish the magistrate with proper data, the three principal cavities of the body should be laid open, and sometimes the spinal canal likewise.

"9. The best mode to be followed in opening these cavities is to begin with the spine and head, and end with the abdomen, and the parts of generation.

"10. If there is any blood effused in a principal cavity, we should remove the coagulated part of it with the hand, and wipe up what is fluid with a sponge, the contents of which are to be squeezed into a jug, that we may be able to determine the quantity of the blood, and find out the opening of the vessel from which it has issued.

"11. If in such a cavity there is any other fluid effused, it also

must be collected and absorbed with a fine sponge, and preserved in a separate vessel, in order that we may be able afterwards to examine it, and to determine its nature if necessary.

"12. If it is suspected that a poison has been taken into the stomach, that organ must not be opened in its natural situation, but must be cautiously removed from the body, in order that we may collect with greater certainty and exactness the fluids and other substances which may be contained in it.

"13. If the wounding instrument has remained in the wound, if a ball, or a fragment of a sword or knife is concealed in the fleshy parts, it will be proper before we extract these foreign bodies, to take notice of their form and direction, and of the state of the injured parts, and to determine if the individual has survived his wound for a longer or shorter time; if the wound has not been made or enlarged after death; if it was possible or easy to extract the foreign bodies contained in it; and if any attempts have been made for that purpose.

"14. The anatomical examination should be made as soon as possible, and terminated at one meeting."—pp. 20-25.

Many other remarks made by the author, with regard to the place in which the body should be examined, and the fumigations sometimes necessary to be used, we pass over as matters of notoriety; but we shall give his list of the instruments, that ought to be employed in the anatomical examination, particularly as this is a subject to which, in general, very little attention has been paid. He has enumerated them in the following order.

"*Instruments to be Used.*—1. A straight pointed knife, strong and sharp, the blade of which, from five and a half to six and a half inches long, should be firmly fixed in a handle, with four or six slides. Such a knife is infinitely preferable to the scalpels or bistouries in common use, in order to make, promptly and dexterously, the large incisions necessary for opening the body; and the practitioner should be provided with two of them.

"2. Three scalpels: viz. one of them straight, and with a back, and another with two cutting edges, instruments which are requisite when it is necessary to dissect any part or follow the course of a vessel: there should also be another like a small hedge-bill. The principal use of this instrument being to cut the cartilages of the ribs, it should be strong, and have a thick back, with a cutting edge in its concavity, and a firm handle.

"3. Two pair of scissors, the one of an ordinary description to cut threads or other soft parts, and the other with short strong blades, particularly intended for cutting the ribs and bones of the cranium in opening the bodies of children.

"4. One or two pair of dissecting forceps, and the same number of hooks; the one single and the other double, for the purpose of laying hold of, and raising up parts which should be examined in a particular manner.

"5. A blunt knife, (couteau mousse) with a strong and well tempered edge, the blade of which, three inches long, should have a thick back, and be cut square at the point and firmly fixed with three nails in a handle with sides. The especial use of this instrument is for separating and removing, with the assistance of the hammer, the processes of the vertebræ, when it is necessary to open the spinal canal. It is used also, like a wedge, in opening the skull, to complete the separation of portions of bone, which the teeth of the saw have missed. Instead of this knife, a piece of a sabre blade may be employed, which for greater convenience may have a handle fixed to it.

"6. A good saw, and we call that a good one, the blade of which, besides being well-tempered and firmly fixed, is furnished with fine, sharp, cutting teeth, jutting out sufficiently to the right and left to have *way*, as the workmen say, and to divide easily and quickly even the hardest bones.

"7. A trephine, or what is still better, not to fatigue the hand, a trepan shaft, with two large, strong crowns, with sharp, good teeth, that we may be able with ease and expedition, to make several openings in the skull, before sawing it.

"8. A slender, flexible knife, like that which painters make use of to mix their colours, with a blade narrow enough to pass through the openings made in the skull, and to separate the dura mater from it, without altering the form and consistence of the brain.

"9. An elevator, for detaching and raising up the pieces of bone which have been sawn, or which had been depressed in consequence of the wound.

"10. One or two wedges, of moderate size, sharp and well-tempered, to remove bony ridges, or finish the cutting of such portions of the skull or vertebræ as the saw could not reach.

"11. A small iron hammer, set firmly in its handle, for striking the head of the wedge or the back of the blunt knife.

"12. Different kinds of probes or wires, to introduce into natural apertures, or into wounds or ulcers. For this purpose we should have:—1. two probes of soft annealed lead, or silver, which may be easily bent or twisted different ways, and which should have at one end a small oval-shaped knob; 2. two solid, elastic, bougies; 3. two grooved probes, one of the ordinary size, and a smaller one, such as is commonly called the whitlow-probe; and, 4. a male catheter.

"13. A pair of compasses for taking the length and breadth of the wounds, and for enabling us to express their form and extent in a precise manner.

"14. A small syringe, made of copper or silver, and able to contain from two to three hundred grammes of water. As the use of this instrument is to inject a fluid into the vessels in order to detect those which have been wounded, it ought to have two additional stop-cocks, of different sizes, adapted to the vessels it may be necessary to inject.

"15. Two tubes of copper or silver; one for the larynx, to be introduced by the mouth into the glottis, the other of an ordinary description, and with a cock, to send air into a hollow organ, or to assist us in discovering the opening of a wounded vessel.

"16. Three needles, two of them crooked, and of different sizes, proper for carrying a ligature round a part, and another straight, like a shoemaker's large needle, for sewing up the body when we have finished our examination of it.

"17. A clew of strong, thick thread, and another of small twine, for making the necessary ligatures or sutures.

"18. Two sponges, a fine and a coarse one, to absorb or clear away such fluids as are found effused in a cavity, in order that we may be able to determine their nature and quantity, and see more distinctly the state of parts."—pp. 28-34.

Our author recommends that we should add to these a little nitrate of silver, a small phial of caustic potass, and another with nitric acid. These are necessary, if we cut or prick the fingers in opening a putrid body, or one that may have the germ of a contagious disorder. After cleansing the wound, it should be cauterized with either of them, but particularly the nitric acid, which to a certainty will prevent infection. It is useful also to have a *mecomatre*, or measurer of length, an instrument which M. Chaussier has very accurately described. Perhaps he has been rather too minute in his description of these matters, but it is only in this way that he can impress his readers with a due sense of their importance; and on this account we hope to be excused for having enumerated them here.

Examination of the Spine.—After directing the attention of the reader to the surface of the body, which should be inspected with the most scrupulous exactness, the author proceeds to the opening of its three principal cavities, but tells us previously in what manner the spinal cord should be examined.

"In forensic medicine," he says, "there are few cases, at least in adults, where it is necessary to open the spine. If, however, it should appear that a wound has affected its internal parts, it must be done, and the opening is made in the following manner: The body is laid on its sternal aspect; something is then placed under its abdomen, in order to elevate the lumbar portion of the spine, or the body may be laid across the table, which will place the head and the lower extremities in a dependent posture. Then, with the cutting knife, we make a transverse incision, extending from the base of one mastoid process to that of the other, passing along the occiput, and dividing to the bone every thing which comes in our way; we next make a longitudinal incision running from the middle of the occiput to the sacrum, along the median line of the body; and then with the point of the knife, we detach at once the skin, and the mass of muscles which adhere to the occipital bone, and to the

spinal aspect of the spine, and turn them back on each side.—After having thus exposed in its whole extent the annular portion of the vertebræ, we take the saw and lay it as close as possible to their transverse processes and we cut successively each vertebræ, guiding the saw from below upwards, that is, from the sacrum to the occiput. When we have sawn on the right and left sides through the annular portion of the vertebræ, we separate and raise up at once the whole series of the spinous processes, which are held together by ligaments and certain muscular fasciculi. If, as often happens from the unequal thickness of the parts, some portion of the vertebræ is not completely sawn through, we complete its separation by placing on the spot the edge of the blunt knife, and then striking upon its back with the hammer. And should the opening be too small to furnish a good view of the sheath of the spinal marrow, we may enlarge it by cutting off with the blunt knife and the hammer all the projecting points of the vertebræ. With practice and a little address, this operation is neither long nor difficult. In performing it, we should take notice whether there is ecchymosis, or contusion in the mass of muscles, or fracture, or luxation, or preternatural laxity in any of the vertebræ, or rupture of their ligaments; and when we have removed the spinal portion of the spine, we ought to examine the state of the medullary sheath, and of its vessels, and of the cellular texture which surrounds it. We then open the sheath in its whole length, to examine the spinal cord, and the fasciculus of lumbar and sacral nerves, which have received the ridiculous appellation of *cauda equina;* and in this examination, we ought to observe if there is not on the surface of this part, or in the substance of the membrane which covers it, a layer of coagulated lymph or pus; if there is not an ecchymosis, or an effusion of blood, serum or pus; or a cut, or some kind of alteration, which may have occasioned the death of the wounded person, or the preceding accidents. Here we should remark, that it is not uncommon to see the spinal veins turgid with blood, and even to find in the membranous sheath of the spine some limpid, yellowish, or glutinous serum (serosité), but it may be observed, this turgidity of the veins is, for the most part, only a consequence of death, of the symptoms which have preceded it, or of the situation in which the body has been kept. The same thing may be observed of the serous effusion: it is merely an exudation which takes place at death, and its quantity varies according to the constitution of the subject, and the time when the body was opened; but we should not look upon these phenomena by themselves, as the work of a concussion, or some anterior violence."—pp. 52-55.

Examination of the Head.—In opening the head, our author makes a crucial incision, extending in length from the root of the nose, along the median line to the spinous process of the fifth or sixth vertebra of the neck, and in breadth from the posterior tip of one ear to the same part of the other. When

the integuments are dissected back, a line is traced with the point of the knife all round the skull in a circular direction, from the middle of the os frontis, a little above the superciliary bumps, and over the occiput a little below its superior arches. Then, in the direction of this line, four trepan crowns are applied, equally distant from each other; two are placed on the forepart of the skull, one on each side, at the edge of the frontal bone, where it is joined to the os parietale; and the two others are placed on the back part of the skull, near each mastoid angle of the parietal bone. Through the holes made by the trepan, we next pass the slender flexible knife, and separate by its means the dura mater from the skull, and proceed to saw the intermediate spaces all round. We thus avoid lacerating the brain or its membranes. To complete the examination of the brain and cerebellum, we are directed to remove also the greater part of the occiput, and the spinal portion of the first five or six vertebræ of the neck; but for the farther detail of this subject, we refer to the work itself.

M. Chaussier next lays down rules for the opening of the thorax, and favours us with a dissertation on the physiology of the lungs; and at the same time cautions us not to cut into their substance till after we have examined the trachea. Our limits will not allow us to follow our author in his able description of these points, but we venture to copy the directions which he has given for opening the mouth, the larynx, and the trachea.

Examination of the Mouth, Larynx, and Trachea.—"It is often necessary," he says, "particularly in cases of poisoning, suffocation, strangulation, or certain kinds of injuries, to examine carefully the state of the mouth, pharynx, œsophagus, and trachea. For this purpose, some cut through the cheeks, laying the mouth open from ear to ear, and having stripped the lower jaw bone of its coverings, they luxate it forwards and remove it entirely, in order to reach the pharynx. This tedious and clumsy manner of proceeding appears to be very improper; for we thus destroy the features of the face, which it is sometimes necessary to preserve, and likewise alter the true arrangement of parts, which it so much concerned us to know exactly. We propose then the following process, which we have several times employed, and which, in our opinion, answers every purpose, being simple, easy, and expeditious. After having fixed and so placed the head, that the fore part of the neck may be stretched and lengthened, we make, in the direction of the median line, an incision which passes through the under lip and extends to the top of the sternum, and we make another which runs along the whole base of the lower jaw-bone. Then, with the point of the scalpel, we detach at one and the same time, the skin and the

fibres of the sub-cutaneous muscle which adhere to it, and continue the dissection till we reach the lateral parts of the neck. After having thus laid bare the anterior region of the neck, and found whether there are ecchymosis or other marks of violence, we must saw the maxillary bone upon the median line: this operation divides it into two equal portions, and these we separate by cutting away successively all the parts which adhere to their internal surface. Continuing the dissection, which is not difficult if an intelligent assistant holds apart the two pieces of the maxillary bone, we depress the tongue and its connections, and coming to the isthmus of the throat we cut on each side the arches of the velum pendulum palati: we now discover the pharynx and examine it, and prolonging the incision downwards and on the sides, we easily find the œsophagus; and, if the thorax has been already opened, we may follow it along the bodies of the dorsal vertebræ as far as the diaphragm. To examine the trachea, it is necessary first of all to remove the thyroid gland, and then wipe away with a sponge any blood that may have been effused from its vessels: next, with the point of the knife, we make a longitudinal incision into the trachea, from below upwards, as far as the os hyoides, dividing the larynx in our way, and if it is necessary to examine the bronchia, we cut away on each side with the saw a piece of the clavicle, and of the first rib, and any portion of the sternum that may yet remain: we then remove the subjacent veins, and after having wiped away the blood, we prolong the incision of the trachea as far as the bronchia, the course of which we may follow, even into the pulmonary texture."—pp. 84-7.

After giving directions for opening the abdomen, and examining its contents, for drawing up a statement of our proceedings, and for examining the bodies of new-born children, and of domestic animals, our author commences the second part of his work, which contains a variety of reports from the age of Ambrose Paré to the present times. In this department, we cannot promise to do more than to make a selection of what we esteem the most interesting cases, and to give M. Chaussier's criticisms upon them. We begin with the dissections of three kings of France.

Report concerning the dead body of Charles IX.—In the year of our Lord 1574, on the 31st of May, at four o'clock, *p. m.* was performed the dissection of the body of Charles IX., the most Christian King of France, in presence of the undersigned physicians and surgeons who performed it. In which the following appearances were observed:—

"The substance of the liver was dry and bloodless, and of a black colour in the extremities of the most depending lobes. The gall bladder, which contained no bile, was rather black, and in a state of col-

lapse. The spleen was in no respect diseased. The stomach was in a healthy state, and both its upper and lower orifices quite sound. All the intestines were of their natural appearance, except the colon, which was of a yellow colour; the epiploon also was ill-coloured, a good deal wasted, in one part ruptured, and no fat was contained in it. No disease could be detected in the kidneys, or in the bladder or uterus. The heart was flaccid and apparently wasting away, all the watery fluid which is usually contained in the pericardium being consumed. The lung which lay on the left side of the thorax, from the false ribs as far as the clavicle, adhered in every part to the side so firmly and obstinately, that it could not be torn away without violence. In its putrid substance there was a ruptured vomica, from which had flowed a quantity of purulent, putrid, and stinking matter, in such abundance that it had choked up the trachea, and occasioned sudden death. In the other lung there were no adhesions, but, being turgid and distended, it was much larger than it is naturally (as was the left lung on account of the putridity of its substance). In its upper part it was in a putrid state, and was filled and contaminated with a pituitous, mucous and foamy fluid, very much resembling pus. The brain was quite sound.

Signed, MARILLE, VATERRE, &c. Physicians.

PARE, DAMBOISE, GUILLEMEAU, &c. Surgeons."

Report concerning the dead body of Henry III. King of France and Poland:—

"We, the undersigned Counsellors, Physicians, and Surgeons in ordinary to the King, certify, that yesterday, the second Wednesday of the present month of August, 1589, about ten o'clock at night, according to an order, &c., we carefully examined the dead body of the late King Henry III., who died at three o'clock in the morning of the same day, in consequence of the wound inflicted by the point of a knife beneath the navel, and on the right side of his belly, the preceding Tuesday, betwixt eight and nine in the morning, and on account of various circumstances which took place, soon after his Majesty received his wound, of all which we have given a separate report. And to have a more ample knowledge of the depth of the said wound, and of the injury done to the internal parts, we have opened the said belly, with the chest and head. After a careful examination of all the parts contained in the abdomen, we found a portion of the small intestine, named *ileon*, pierced through and through, of the breadth of the knife, a foot long, which we were told was bloody for more than four inches, being the extent of the wound from its orifice to its utmost depth. Having removed a great quantity of blood, which was effused through this space with some large clots of blood, we found the mesentery also pierced in two different places, and several veins and arteries wounded. All the noble, natural, and animal parts, contained in the thorax, abdomen, and head, were in a sound state, except that they and the veins and arteries, both large and small, were empty of blood,

which had issued from those internal wounds, particularly of the mesentery, and been retained in the above-mentioned space, as in a strange and unnatural place; in consequence of which, death, of necessity, and in the space of eighteen hours, reached his most Christian Majesty, being preceded by frequent syncope, extreme pain, difficulty of breathing, nausea, continued fever, intolerable thirst, and very great restlessness. All these symptoms made their appearance soon after the wound had been inflicted, and continued till the complete and final syncope of death, which, for the reasons above-mentioned, in spite of every precaution, was inevitable.

Signed, Lefevre Dortoman, &c. Physicians.
Portail, Lavernot, &c. Surgeons."

Report made on opening the body of the deceased King Henry the Great, IVth of the name, King of France and Navarre, which was made on the 15th day of May, 1610, at four o'clock in the afternoon: he having been wounded the preceding day by a knife, while in his coach; in consequence of which he died immediately, after having uttered a few words, and thrown some blood from his mouth.

The following circumstances were observed by the Physicians and Surgeons, undersigned:—

"A wound on the left side, betwixt the armpit and the pap, upon the second and third upper ribs, a finger's breadth long at its orifice, running four inches upon the pectoral muscle, towards the said pap, but without penetrating to the inside of the chest. The other wound was lower, betwixt the fifth and sixth rib, in the middle of the same side, its orifice two finger's breadth long, and penetrating the chest and piercing one of the lobes of the left lung, and beyond that, cutting the trunk of the venous artery, (pulmonary vein) so as that the little finger might be introduced into it, a little above the left auricle of the heart. From this spot both lungs had received the blood which was thrown in a full stream from the mouth, and with the surplus were so gorged as to have become quite black, like a part affected with ecchymosis. There was found also a great deal of clotted blood in the cavity of the said chest, and a little in the right ventricle of the heart, which, as well as the great vessels which come from it, were all in a state of collapse, from the evacuation: and the vena cava to the right of the cut (very near the heart,) appeared to be blackened, from the contusion made by the point of the knife:—wherefore they all judged that this wound was the only and the necessary cause of death.—All the other parts of the body were found in a very entire and healthy state.

Signed, A. Petit, A. Milon, &c. Physicians to the King.
Martel, Pigrai, Guillemeau, &c. Surgeons to the King."

These three Reports, extracted from the works of Jacques Guillemeau, are given here merely as historical documents, and to make known the various modes of drawing up Reports. We

shall, however, make two slight remarks upon them, which may be applied to other cases.

"In the Report on the opening of Henry III., it was said: *We found a portion of the small intestine, named ileon, pierced through and through, of the breadth of the knife, a foot long.* This mode of expression does not indicate in a very precise manner the form and extent of the wound of the intestine, and gives to persons unacquainted with the structure of the parts, the idea that the wound of the intestine was a *foot long*, which the authors of the report certainly did not mean to say; but this ambiguity should have been avoided: and in a judicial proceeding, every thing should be expressed in the clearest and most precise manner, and should be intelligible, even to persons who are ignorant of medicine.—In the Report of the opening of Henry IV., it is said, that *the vena cava appeared to be blackened from the contusion made by the point of the knife.* But in a judicial report, every thing should be positive; we should mention what really is, and what has been actually ascertained, and not merely what has *seemed or appeared to be:* appearance, or a first glance, if we are satisfied with that, may lead us into error. We ought also to designate the form and extent of the alteration indicated; in short, we should always make use of a suitable expression: Thus, in the present case, we should not say, 1. that the vena cava *appeared to be blackened;* 2. the extent of this *blackness*, or black colour, should have been pointed out; 3. after all, it is certain that *contusion* has been confounded here with *ecchymosis.* The point of a knife which opens a vein does not produce a contusion; but the blood which has escaped from a vein, may be infiltrated into the insterstices of the laminous texture which surrounds it, and thus produce a *thrombus*, of a larger or smaller size, or an *ecchymosis* more or less diffused; and such things should be carefully distinguished, especially in certain cases."—pp. 142-9.

These Reports we hope will be agreeable to the reader, from having originated in the infancy of Forensic Medicine. To these succeed Reports made on the body of a wounded man, found dead in 1650, and on that of a woman in 1682, supposed to have been poisoned; the faults and composition of which our author has investigated with great minuteness. He has taken occasion, at the same time, to digress on the inutility of dissecting the bodies of living animals; and has made some remarks on the meaning of the French words, *experience* and *autopsie*, and on the etymology of *poison, venom, veins, and miasma.*

Our next extract is the Report upon the examination and opening of the body of a woman found suspended after her death:—

"We, physicians, &c., in the city and jurisdiction of Nantes, having, by order of M—— the king's solicitor in the said city,

repaired to the village of C———, about a league distant from Nantes, there entered the house of one Lacaille, a labourer in the said village, and were conducted to a barn, where we found, suspended to a beam or joist, the body of a woman, about 50 years of age, which we were told was that of Jeanne Souchet, the wife of the said labourer. Finding that the face of this body was in no respect discoloured, that there was no foam at the mouth nor blackness on the tongue, nor any mucous excretion stuffing up the nostrils, and that there was not the least redness, nor lividity, nor change of colour round the neck at the place where the cord which suspended her had made its impression, we determined to make an exact examination of every other part of the body; and in doing this, we perceived that it had a very small wound on the right and anterior lateral part of the thorax, concealed under the pendulous substance of the breast, and into which we could with difficulty introduce a small probe. But having dilated it, we found that it penetrated betwixt the sixth and fifth true ribs; a circumstance which induced us to open the chest, that we might ascertain the course and extent of the said wound; by which means we found that this small wound, made with a round, sharp-pointed, and very slender instrument, had passed from one side of the heart to the other, and had caused a very great effusion of blood into the chest. Therefore, after mature consideration, we are of opinion that the wound of the chest had preceded the suspension of the body of the said Souchet, and was the only and true cause of her death. Done at the village of C———, February 23, 1683."

Observations.—This Report, which is found in the work of Devaux, instituted *l'art de faire les rapports*, Paris, 1743, p. 527, is extremely important, and merits our particular consideration. The persons ordered to examine the body and to give an opinion on the cause of death, *finding the face in no respect discoloured* (that is pale and without swelling or lividity), *and no foam at the mouth nor blackness on the tongue, nor any mucous excretion stuffing up the nostrils, and not the least redness nor lividity, nor change of colour round the neck, at the place where the cord, which suspended her, had made its impression*, concluded that the body had not been suspended till after death; and a further examination evinced the correctness of their conclusion, and shewed the real cause of death. The report, however, is not drawn up with that attention to method which was desirable, nor has sufficient exactness been observed in the examination of the body, or in the enumeration of the different necessary circumstances. Thus the reporters should not have said merely, that *they found suspended to a beam the body of a woman about fifty years of age*; but they ought, 1. to have made mention of the state and situation of the body, the impression round the neck being deep or otherwise, in proportion to the

weight and plumpness of the body; 2. mention should also have been made of the position of the chin, always more or less inclined towards the chest, of the lips, of the ears, and above all of the eyelids and eyes, which, in all cases, merit a particular attention: it is said indeed, that there was *no blackness on the tongue;* but they should have added also that there was no swelling of it, &c.; 3. it would have been useful likewise to have mentioned the position of the cord which held the body suspended, and the various surrounding objects, and whether it was possible that the woman could have reached to the beam to hang herself from it; 4. in place of dilating the wound, a longitudinal incision should have been made at some distance from it, in order that the thorax might be opened in the usual manner, without interfering with the wound; 5. although a wound which has pierced through the heart be quite sufficient to cause sudden death, it would appear that a wound which is so small at its orifice as barely to admit a small probe, should be still smaller when it has passed into the pericardium and the heart, and in that case the effusion of blood should be confined almost entirely to the cavity of the pericardium, unless the instrument may have been moved in different directions, so as to produce laceration, or a larger wound than what existed on the outside. It would have been right, therefore, to have mentioned expressly the form and size of the wound observed in the heart and pericardium, and to have stated precisely in what part of the chest the effusion of blood was found; 6. lastly, it appears that in this case the thorax was the only cavity opened; but though an adequate cause of death was ascertained, a search should be always made in other parts for diseased structure or marks of violence.——Boknius, professor at Leipsic, in his Treatise, De Renunciatione Vulnerum, Lipsiæ, 1755, p. 392, has given an analogous case, extracted from the records of the College of Physicians of Leipsic.

"Here attention was paid to a number of signs negative of strangulation. It was a woman who was found suspended on the 19th October, 1708. Her face, neck, shoulders and chest, were of their natural colour; her eyes were not prominent, nor was her tongue black and swollen, nor had the rope made any mark; but both sides of her belly from the false ribs downwards, and her loins as far as the fundament, and her thighs being black and blue, it was concluded that she had not hanged herself while living, but that her body had been suspended after the infliction of blows and stripes which had proved mortal."—pp. 177-83.

We cannot pretend to follow M. Chaussier through all the cases which he has inserted in this part of his work, and which he has commented upon with so much ability and truth; but we

can recommend them to our readers as well worthy of their attention; and we insert one of them as a specimen of the rest.

Suicide by Strangulation.—It is a case upon which two Reports were drawn up, the inspectors attributed the death to suicide by strangulation.

"In order," says our author, "that the reports which follow may be appreciated, we shall give a sketch of the case they treat of, the authentic details of which were made public at the time, in conformity to the orders and decision of a special tribunal.—General Charles Pichegru had been kept for some time as a prisoner in the tower of the Temple: on the 5th August 1804, he appeared to be in good health, in the evening he had taken his supper as usual, and about ten at night he had been locked up; and the centinel on duty declared that he had heard him cough and spit several times from three o'clock till half-past three in the morning; and at seven (6th April), when they came to light his fire in the morning, he was found dead in his bed. First of all, an officer of the police is called in, who at first sight declared that suicide had been committed; but a few hours after the special criminal tribunal, to whom it had been announced that *the said Charles Pichegru had committed suicide in the course of the preceding night,* ordered a committee of five of its members to repair to the Temple and ascertain if the said C. Pichegru had committed suicide, and to collect all the particulars of the event; and at the same time they named five surgeons and a physician to visit the body and verify the cause of death. These gentlemen, having acted in conformity to their instructions, (about twelve hours after the presumed death) unanimously declared that they had proceeded to the said tower of the Temple, and had been conducted by the jailor into the room in which was the Ex-General Charles Pichegru;—that they had there found upon a bed a dead body, which they had observed to be of the masculine gender;—that the dead man had appeared to them to be from forty to forty-five years of age;—that his height was one metre seventy-eight centimetres; that his hair was dark brown, his eyebrows of the same colour and arched, his forehead large and bald, his eyes grey, a clear blue, his nose long, thick, broad and flat at its lower extremity, and hollow at its root; his mouth of ordinary size, his chin round and thick, his face full and brown, his head strong, his chest broad, his thighs and legs slender in proportion to the trunk;—that, after having examined every part of the said dead body, they had observed a circular impression round the neck about two inches broad, and more marked on its left lateral part than elsewhere; that there was strangulation which had been produced by means of a black silk neckcloth firmly tied, into which one had passed a stick about five centimetres long and five in circumference, and that one had made a tourniquet of the stick, by which the said neckcloth had been drawn more and more close, till the said strangulation was brought about; that they had afterwards remarked that the said stick rested by one

end on the left cheek; and that, in being turned with an irregular movement, it had produced on the said cheek a transverse scratch about six centimetres long, extending from the cheek to the conch of the left ear; that the face was ecchymosed, the jaws locked, and the tongue caught between the teeth; that the ecchymosis extended over every part of the body; that the extremities were cold, the muscles and fingers strongly contracted; that they were of opinion, from the position in which they had found the body, and from the observations which they themselves had made, or received an account of from others, that the individual whose body they had been visiting, (and which the jailor told them was that of the Ex-General Pichegru) had strangled himself."

Next day, the 7th April, about nine o'clock in the morning, (thirty hours or so after the presumed death) the tribunal gave a new order to the same physicians and surgeons to proceed to the opening of the body, in presence of the C—— judges, and of the C—— substitute of the commissary of government, and after having gone through the formalities required by law, the physicians and surgeons deposited in court a report, stating their observations and proceedings, the tenor of which is as follows:—

"We the undersigned, &c. &c., in conformity to a decision of the especial tribunal of the Seine, requiring us to open the body of Charles Pichegru, Ex-General, who had committed suicide, and to ascertain the state of the internal parts; have opened the said body accordingly, in presence of —— commissioned to be present on the opening of the body, and to assist at all the proceedings which may be its consequence; and have observed that all the vessels of the hairy scalp were turgid with blood, the surface of the dura mater injected, and the longitudinal veins turgid, particularly at its lower and back part; that the dura mater was slightly adherent and ossified where its fold forms the falx cerebri; that there was an adhesion betwixt this membrane and the surface of the brain; that the inferior surface of the brain was turgid with blood; that the middle and upper part of the brain corresponded to the above mentioned adhesions, and presented a mucous surface sprinkled with small lymphatic glands, from which a whitish matter oozed out; that the surface of the brain was of its ordinary colour; that there was nothing uncommon in the ventricles, except that the choroid plexus was of a darker red than usual; that there was an hydatid at the upper part of the tuber annulare; that there was no unusual appearance in the cerebellum; that there was a good deal of fat in every part of the abdomen; that the intestines were of a yellowish brown colour; that the inside of the stomach was inflamed but without erosion; that the urinary bladder, and the kidneys and other organs, were in a natural state; that the two lobes of the lungs were gorged with blood; that the pericardium

was sound; that the œsophagus in its whole length was perfectly sound, except at that part of the neck where the strangulation had been accomplished; wherefore we continue to think that Charles Pichegru, Ex-general, committed suicide by the means which we indicated in our report of yesterday. Done at the Palace of Justice, &c. and signed, &c.

"In reading the summary of this business, we are at once struck at seeing:—1. That after a single inspection, or without examination, without a previous visit, and merely in consequence of what was said to him the commissary of police declares immediately, and without hesitation, that *the said Charles Pichegru had committed suicide in the course of the preceding night;* and, 2. That this fact is announced in the same terms to the criminal tribunal. It would seem then, that the opinion was formed at the very moment; and in reading the first report, which contains merely the description of the external examination of the body, it would seem that the inspectors *(experts)* had obeyed, *with great simplicity,* the impulse that was given them, and adopted the prejudice conveyed to them. But, passing that over, let us examine the two reports of the inspectors: they might afford matter for a long discussion, but we shall confine ourselves to a few remarks, which will make young physicians sensible of the attention they should bestow in the performance of judicial examinations, and the drawing up a report of their proceedings.

"In the first Report, made on the 6th April, the inspectors give, 1st. A very detailed description of the apparent form of the subject, a circumstance of no use here, and foreign to their duty; but they neglect entirely the object which really concerned them as practitioners; they speak neither of the state of the eyes and eyelids, nor of the position or attitude in which they found the body; they merely say it was *upon a bed,* without mentioning whether it was naked, or dressed, or covered, and without describing the position of surrounding objects. 2d. They then say that *they had observed a circular impression round the neck;* and, in a subsequent article, they speak of *a black silk neckcloth, firmly tied, into which one had passed a stick;* but before speaking of this circular impression on the neck, they certainly ought first to have given an exact description of the manner in which this neckcloth was placed round the neck, and how it was tied; they should also have ascertained whether this circular impression was found at the upper, middle, or lower part of the neck; and they should have stated its depth, and particularly its colour. They say, indeed, that this impression observed on the neck was *more marked on the left lateral part than elsewhere:* but did this appearance, which so struck the inspectors, depend on change of colour, or on the folds of the skin? for, observe, a ligature drawn tight, and kept for some hours, round any part of a dead body, forms a depression on it of greater or less depth, but does not alter its colour. 3d. After having remarked that the face was ecchymosed, they add that the ecchymosis extended over

the whole body; but here there is certainly, at least, an error in the acceptation of the word; for, without doubt, the inspectors meant to say that the skin had a livid, violet, or brownish tinge, a thing which is often observed in strangulation and several other cases; but this lividity, which is sometimes diffused over the whole body, and sometimes confined to certain parts, depends entirely on the stagnation of the blood in the network of capillary vessels, and should not be confounded with ecchymosis, which, as is well known, consists of an extravasation or infiltration of blood into the laminous or areolated texture of a part. 4th. The inspectors say, also, *that the extremities* (that is to say, the limbs) *were cold, and the muscles and fingers strongly contracted;* but as, at the time of the examination of the body, death had taken place above twelve hours, a circumstance which the inspectors have not mentioned, the trunk, no doubt, still preserved some degree of warmth, the blood some part of its fluidity; and without doubt, also, the muscles placed upon the neck and trunk had not yet acquired that stiffness which comes on after the body is quite cold. These circumstances ought not to have escaped the attention of the inspectors, for in this state, and particularly when a dead body, still warm, is carried from one place to another, or when its position is changed, the blood is borne by its weight, to the most declining and least resisting parts; it is stopped there and distends them, filling the vessels, and forming in them an infarction more or less considerable: thus, as has been demonstrated by different anatomical researches, if a dead body, still warm, is placed on a table, inclined in such a manner that the head may be dependent, or lower than the thorax, all the vessels of the head will, in a few hours, be more or less gorged with blood, and we shall even frequently find in them, those tenacious, whitish, ramified concretions, which are commonly distinguished by the name of polypi.

"If we now pass to the examination of the second Report, we perceive in the enumeration of circumstances observed at the time of the examination, on the one hand, superfluities and details irrevalent to the subject, and on the other omissions and errors, or at least ambiguity. Although this Report was but a sequel of the first, it would have been proper to have indicated, in a few words, what was the state of the dead body at the time of the second examination: and it would have been proper to have indicated in what manner they had proceeded to lay open the splanchnic cavities; and if, after having sawn the cranium, secundum artem, the skull-cap was easily lifted off. 2d. After having observed that all the vessels of the hairy scalp were turgid with blood, the inspectors add that the dura mater was slightly adherent; that there was an adhesion betwixt this membrane and the surface of the brain; that the middle and upper part of the brain corresponded to the above-mentioned adhesions, and presented a mucous surface sprinkled with small lymphatic glands, from which a whitish matter oozed out. To me, all this appears neither very clear nor very exact:

in fact, 1st. The meninx, or *dura mater,* as it is called, is always adherent to the internal surface of the skull, and especially to the median, or *sagittal* suture; 2d. The middle or upper part of the brain, particularly in the vicinity of the median, or *longitudinal* sinus, has by means of the external layer of the meninges, *(pia mater,* or *arachnoid)* an intimate connection or *adhesion* with the meninx, and in this place the external layer of the meninges is of a whitish colour, and there we always find, in an adult person, small, round whitish bodies, *(grains)* of a soft consistence, and in clusters, which the inspectors look upon as small lymphatic glands; but this appearance is constant and quite natural: did the inspectors consider it as something preternatural? But, after all, could these details be of the smallest use to the principal object of the examination? and what signified it that there was *a good deal of fat in every part of the abdomen?* is not this a frequent occurrence, peculiar to some individuals, and particularly to those who are much on horseback? 3d. In another part, the inspectors *say that the inside of the stomach was inflamed, but without erosion.* Such an assertion, made so positively by five surgeons and a physician, immediately strikes every well-informed man, who examines, and is capable of reflection; for even the slightest inflammation of the stomach is a severe and painful affection, and one which produces a great change in the physiognomy, and in the state of the functions. It may be occasioned by poison; and inspectors, who, in the examination of a dead body, find the *inside of the stomach inflamed,* ought to examine with the greatest care, not only the state of that organ, but also the nature and quantity of the substances which it contains; and they ought, as far as possible, to inform themselves of the usual diet of the person, and of the circumstances which preceded his death. In short, to prevent any kind of fallacy, it is proper, after collecting and putting aside the contents of the stomach, to plunge that organ in water, to wash it slightly, and to examine with attention if the blood-vessels which pass through its texture, or the capillaries which are spread on its internal membrane are twisted; for, and it should be attended to, the inside of the stomach may have a tint of a darker or lighter red, without being in the least inflamed. The use of an infusion of wild poppy, as has been shewn by Varnier, (Journ. de Med., Tom 7.) gives the stomach and œsophagus a very remarkable violet-red colour; and may not the decoction of madder, and of logwood or its extract, which is sometimes employed as a medicine, dye the stomach and intestines of a darker or lighter red? and may not the same effect be produced by some kinds of wine, and by various alimentary substances, otherwise quite wholesome. The presence of food in the stomach, and the use of spirituous liquors after meals, increase the activity of the circulation in the organ, and are sufficient to produce a certain degree of redness. Thus, as is expressly remarked by M. Pinel, (Nosogr. Tom. 2. 5th Edit. p. 313.) the opening of a dead body has often presented traces (as far as colour

goes) resembling those which are caused by inflammation of the stomach, though there had never been any appearance of the symptoms which characterize gastritis. When they so positively declare *that the inside of the stomach was inflamed,* have the inspectors reflected upon all these circumstances? It does not appear that they have; at least, they say nothing of it in their report. They tell us neither how they ascertained this to be inflammation of the stomach, nor what was its extent or intensity; and can an assertion entirely destitute of proof deserve any attention? 4th. They say afterwards that *the two lobes of the lung were gorged with blood*: we would fain think that this is an error of the transcriber's, for every one knows that there are two lungs, each of which is divided into lobes; but though the lungs may have been *gorged with blood,* this certainly was not the case in every part of them; and attention should be paid to this circumstance, as it may indicate the position at the time of death. 5th. At the conclusion of their report, the inspectors say; that *the œsophagus, in its whole length, was perfectly sound, except at that part of the neck where the strangulation had been accomplished.* This point which, in the case before us, was the most important of all others, required a very circumstantial detail, and yet the inspectors say nothing more than this, *that the œsophagus was perfectly sound, except at that part of the neck where the strangulation had been accomplished;* and they leave us entirely in the dark, as to the kind of alteration which had taken place there, and they say nothing of its extent, or how they had detected it. On this subject we may observe: 1. That the œsophagus begins at the lower part of the larynx, a little below the middle part of the neck; 2. That it lies on the bodies of the vertebræ of the neck, and that it is covered by different soft parts. Admitting, therefore, the assertion of the inspectors, we may remark, that if there had been contusion, ecchymosis, or alteration of the œsophagus, the soft parts which cover it would have shewn at least some traces of the injury: the ligature, too, which was the instrument of strangulation, must have been placed beneath the larynx; but these, so important objects, are entirely forgotten or neglected in the report. Is it possible that they could have escaped the attention of six inspectors?

"However that may be, the six inspectors, after having stated the different observations made in their examinations, hesitate not to conclude, in their first report, *that the individual whose body they had been visiting had strangled himself;* and they repeat, in their second report, that the said individual *committed suicide by the means indicated in our report of yesterday.* Here two questions naturally present themselves, which should not have been confounded by the inspectors, because they were not equally under their jurisdiction. 1. Has the individual with whom we are concerned been strangled? The answer to this question belonged entirely to the inspectors; they alone could, and ought, to have demonstrated, from the appearances which they had observed during the examination, that strangulation

was the only and true cause of death: but, as we have already seen, the account which the inspectors render of their observations is inexact and incomplete; it is erroneous in some points, obscure in others, and if, in the sum total of circumstances, there existed not other particular motives, we might with reason dispute the fact of strangulation, because we do not find indicated in the report all the signs characteristic of this kind of death. 2. Has the individual strangled himself? In the present case, this question is very important, and its answer one of great delicacy, because it requires the consideration of several circumstances, some of which do not come within the range of the physician's duties. Let an individual hang himself, by passing his head into the noose of a rope, fixed to a wall or the branch of a tree, &c.; the case is so evident, that there can be no doubt about it, and the physician who examines the body, after taking into consideration the position of the noose, the impression which it has made on the neck, and the absence of all external violence, may demonstrate and declare, in a positive manner, that suicide has been committed. But the case we are now treating of is less common, and more embarrassing; there is found upon a bed the body of a man, round whose neck is a black silk neckcloth firmly tied, and into which ONE HAD passed a stick, and of which ONE HAD made a kind of *tourniquet, with which the neckcloth had been drawn more and more close, till the strangulation was brought about;* but, who *had* passed this stick into the neckcloth? who *had* made a tourniquet with this stick, to draw close the neckcloth? what motives could determine the inspectors to affirm that the individual had committed suicide? It is certainly possible, that, by the process here indicated, a resolute man may strangle himself; but it may be observed, that, in such a case, the neckcloth would make but a slight impression on the muscles of the neck, and a still less one on the œsophagus; for the stoppage of circulation in the veins of the neck produces an instantaneous loss of sense, and consequently takes away the power of drawing closer the tourniquet. It is also possible that the crime may have been committed by another; and as, in these two cases, the effects are nearly similar, the inspectors may with propriety assert, that, in both, death has been occasioned by strangulation, because they find certain proofs of it in the dead body; but they ought not to say that there has been suicide, because the mere examination of the body cannot give them any proof of it. All they can do is to add to their report, that, from every circumstance which has been communicated to them, or which they themselves have observed, it appears to them very probable that the individual has died by his own hand. It is the duty of a magistrate, in such a case, to take the necessary steps to obtain proof that no second person could co-operate in the death of the individual we have been examining."—pp. 279-297.

In this part of M. Chaussier's work, besides those we have

already mentioned, there are twenty-three reports—eleven upon gun-shot and other wounds, seven upon cases of poisoning, three of disease, one of drowning, and one of hanging—all of them commented upon by our author with the same care and minuteness which he has displayed in his examination of the above.

We now proceed to the third division of the work, which treats of *ecchymosis*, *sugillation*, *contusion*, and *lividity*. Here it is the chief aim of M. Chaussier to distinguish with accuracy these affections, so frequently confounded in the reports of medical men, who ought to have known better.

Ecchymosis.—If we attend strictly to its etymology, this term means the pouring out or issuing of fluids from their vessels. Its signification, however, is restricted to that extravasation or effusion of *blood* which takes place in the interstices or areolæ of different textures; and this is generally occasioned by the accidental opening of capillary or other blood-vessels. It must be carefully distinguished from the mere *stasis* or congestion of blood in the net-work of capillary vessels, which ceases quickly with its causes, and does not present that diffusion, or those shades and gradations of colour, which are always observed in the resolution of ecchymosis.—*Sugillation*, according to M. Chaussier, is, properly speaking, but a synonym of ecchymosis, and the distinctions which, for some years past, have been attempted to be made betwixt them, are entirely arbitrary, and of no real utility. It is derived from the Latin word *sugere*, to suck, and is said to be the effect of an internal rather than an external cause.—*Contusion* is an injury done to the texture of a part by a body which has bruised but not wounded the skin; and it may be called a kind of concealed subcutaneous wound.—The word *meurtrissure* (which we have translated *lividity)* is peculiar to the French language, and means a contusion produced in a quarrel or fight betwixt two or more persons, and, consequently, it should never be employed by inspectors but in its true sense. We are not aware that there is any word equivalent to it in English; but it shews us how cautious we should be in the use of words.

Our author next enumerates the various causes of ecchymosis, and gives some singular cases of it which occurred in pregnant women, and in muscular and other parts. He then, in allusion to its causes, distinguishes four kinds of ecchymosis—the *traumatic*, the *spasmatic*, the *symptomatic*, and the *spontaneous*—each of them differing in its form, situation, and extent. It is impossible, considering our limits, to enter on these subjects, and we must be satisfied with one extract.

"A healthy young woman," says our author, "complained to a magistrate, that, eight days past, she had received a blow on the left breast, and demanded that she should be examined, in order that the state and the truth of her complaint might be ascertained. A physician and surgeon, who were named for this purpose, found on the left breast, under the delicate skin of that organ, two superficial ecchymoses, without pain or swelling, separated from each other the distance of an inch; one was situated a little above the nipple, and the other at the upper and inner part of the breast; each had a well-marked elliptic form, ten lines long and eight broad; and their circumference, in its whole extent, was of a brownish red, without the least tinge of yellow or irregular diffusion of any kind. After a careful consideration of every circumstance, the inspectors declared, in their report, that the two ecchymoses above mentioned were not the effect of a blow received on that part eight days before their examination; that, considering their general and uniform colour, they could not have existed for more than from twenty-four to forty-eight hours; and that their regular and circumscribed form seemed to indicate that they had been produced, not by a blow, but by suction with the mouth. They also rested their opinion upon this circumstance, that, during their examination, they had found on the right breast two superficial, yellowish, diffused spots, which were evidently the consequence of ecchymosis, which had been produced on that part seven or eight days before: and the truth of their opinion was confirmed by investigation of the affair entered into some time afterwards."—pp. 411-412.

There is a particular kind of alteration, as was observed in the remarks on the case of Pichegru, which inattentive or ill-informed persons take for ecchymosis, and consider as the effect of violence or blows; we mean those lividities or discolourations which are often met with on the surface of dead bodies, and which, in the Dictionnaire des Sc. Med., are called *ecchymosis without extravasation*, that is, *without ecchymosis!* They generally occur on the most depending part of the body, and are sometimes observed on its surface, in the neighbourhood of internal organs which have been inflamed; they are confined entirely to the skin, and are, as we have already said, merely the effect of congestion. The same thing, however, is observed in internal organs, which abound with blood-vessels or capillary ramifications, and especially in the lungs.

We regret that we cannot follow our author in his examination of the *lividities* and *ecchymosis* which are so often observed on the bodies of new-born children, and which, though perfectly natural, considering the circumstances of the delivery, may have given rise to a suspicion of some criminal intention. We can only observe, that M. Chaussier has been at great pains

to discriminate them. He has also given cases to shew the nature of those ecchymoses which sometimes appear on the surface of the body, after wounds which have penetrated some internal organ; and, in opposition to the opinion of Valentia, he shews that they are not the sign of an internal effusion of blood. They are always in a dependent part.

Contusion is always and necessarily accompanied by ecchymosis; but ecchymosis may exist without contusion, and is not always the effect of antecedent violence. Though extremely various in degree, contusion may be reduced to three heads: 1. *Simple bruising* of textures with rupture of some capillary vessels and infiltration of blood into the interstices of the sub-cutaneous cellular texture: 2. The *rupture* or *dilaceration* of textures, with inter-muscular ecchymosis and thrombus, or effusion and accumulation of blood into one place: 3. *Attrition*, deep-seated contusion, with crush of textures, stupor, cessation or diminution of the circulation in the part, and tendency to gangrene; complete disorganization of the soft parts, which appear as if they were mashed, that is to say crushed, comminuted, and reduced into a kind of pultaceous substance, mixed with a greater or less quantity of black fluid, or half coagulated blood. Many cases are given in support of this division; and then we have a very accurate enumeration of the consequences or effects of contusion. Some remarks had previously been given on the wind of a cannon ball, the supposed effects of which are now, as it is well known, referred to contusion by the ball itself.

Commotion, or concussion, is the subject next treated of by our author. A shock given to the brain occasions, it is thought, a diminution or sinking *(subsidentia, collapsus)* of that organ, by the retropulsion of part of its fluids into the circumjacent vessels; and hence after blows or falls upon the head, the discharge of blood from the eyes, nose, mouth, and ears. M. Chaussier, though he has been often present at the opening of persons killed instantaneously by a blow or fall upon the head, never chanced to observe this sinking of the brain, yet he is far from denying it. Concussion of the spinal marrow is not so frequently mortal as that of the brain; but its consequences are infinitely more tedious; the palsies which result from it, yielding with difficulty to time and the action of remedies.

The dissertation is concluded with the following queries:—*Can contusions be made on a dead body? Can ecchymosis come on spontaneously after death?*

The volume itself now ends with an examination of this question:—*Can we ascertain whether the wounds which are found on an individual have been inflicted by himself or by an adversary?*

To elucidate this question we have two cases from the works of Ambrose Paré, and an article by Baron Larrey. The latter is the examination of a great number of the soldiers, wounded in the battles of Bautzen and Wurtchen; Buonaparte having imagined that most of the slight wounds had been inflicted by the soldiers themselves, with the view of escaping for a time from the hardships of active service. The etymology of *poltroon*, (pollex truncatus) shows that such things have happened; but the examination which was instituted, removed the imputation of such dishonour from the French army.

We now bring our Review of M. Chaussier to a close. He is an able but a diffuse writer; not satisfied with exploring the most intricate windings of his subject, he not unfrequently digresses into paths very remotely connected with it. But in no part of his work does he tire his reader. Even in his longest sentences (and they are sometimes almost interminable) he is always perfectly intelligible; and this is owing to his having defined and given a precise meaning to his words, a circumstance which makes us view with the less regret the errors of his punctuation. His style is animated but not affected, and he censures with marked displeasure the affectation we so often meet with in medical writings. He seems, however, to have some little wish to be taken for a Greek scholar; and in that case we are surprised that he should have allowed his Greek to be so very incorrectly printed.

ART. IV. *Observations on the History and Treatment of the Ophthalmia, accompanying the Secondary Forms of Lues Venerea. Illustrated by Cases.* By THOMAS HEWSON, A.B. Member of the College of Surgeons in Ireland, &c. With an Engraving. London, 1824. 8vo. pp. 114.

It must often happen that peculiar forms of disease are distinguished in practice, or perhaps treated without being distinguished, long before their real nature has been satisfactorily illustrated in systematic writings. It would not be a difficult task to accumulate numerous instances tending to prove the truth of this opinion; but there is not, perhaps, any more decided than the particular affection which Mr. Hewson has now brought formally within the range of medical science. According to this gentleman, Mr. Saunders was the first author, at least in this country, who made syphilitic ophthalmia an object

of particular and accurate observation, and who took a correct view of its distinguishing symptoms. He asserts however,

"That though the disease has since attracted pretty general attention, and has been treated of by some eminent writers, any person who is familiar with its appearances, and makes it an object of particular study, will find that, in numerous instances, it is not yet distinguished with sufficient accuracy from the common kinds of ophthalmia; nor is the proper treatment observed in these respective states of disease."—Intr. p. 10.

From these considerations he was induced to think

"That a short and distinct practical view of the venereal ophthalmia, divested of those speculative doctrines, in which the whole subject of lues venerea has, within these few years, been involved, and from which the affection before us has not wholly escaped, was yet wanting, and would be particularly useful among the junior members of the profession."—Intr. p. 10.

Mr. Hewson prefers the term venereal ophthalmia to that of syphilitic iritis, commonly adopted, on the ground that the latter would seem to limit the disease to the iris, and that it gives a very inadequate idea of a complicated series of symptoms. He divides the symptoms into those of two stages: in the first, they are all of a temporary nature, and effectually curable; in the second, they are in a great degree out of the reach of relief, and more or less permanently injure the structure and functions of the eye. The disease always first attacks one eye, and after having there gone through its various stages, then seizes on the other. We shall now proceed to give the author's account of the symptoms, and for the most part in his own words:—

"The first stage usually begins with some uneasy sensations about the ball of the eye, sometimes so slight as not to be complained of: there is generally a flow of tears; the admission of light gives pain; and objects appear as if seen through a mist."—"There appears always more or less external inflammation, and two sets of vessels are in general distinguishable; one superficial, which belongs to the conjunctiva; the other more deep-seated, connected with the substance of the sclerotic: in colour they are sometimes of a florid, but oftener of a purple or venous hue." "A great part, however, of the redness of the eyeball is produced by vessels passing through the sclerotic, which becoming more numerous and frequent in their inosculations as they advance forward, and terminating abruptly about a line from the cornea, cause the peculiar appearance of almost a distinct red circle. Neither at this, or the more advanced periods of the disease, do these enlarged vessels pass over the surface of the cornea; nor have I observed any speck or ulcer forming on it."—p. 5.

"The aqueous humour is always more or less clouded by an

opaque fluid, which is generally seen floating in the anterior chamber. This prevents a clear view of the iris and pupil, and causes an appearance as if there was an opacity of the cornea. As to its nature, this opaque fluid would appear to be lymph, secreted by the vessels of the inflamed iris. It varies in quantity; it is sometimes so abundant as to render the greater part of the iris invisible; and intercepting all passages of the rays of light, for a time entirely deprives the patient of vision. In some cases it scarcely disturbs the transparency of the aqueous humour: in others we see it condensed and collected into a mass, and attached to some part of the iris, generally near the pupil. Whilst in this state, in the more advanced stages of the disease, vessels shoot into it, and it becomes organized." —p. 6, 7. "In a few instances, instead of lymph I have seen blood effused into the interior chamber, and nearly filling it."

According to Mr. Hewson, however, this, though a symptom that may alarm both patient and surgeon, is not attended with any bad effects.

The appearances of the pupil vary in different cases.

"In a few, it remains for some time preternaturally dilated and fixed, as in amaurosis; but in general it is rather within the middle state of expansion, and remains nearly immoveable in every variation of light." "As the disease advances the pupil contracts, and soon begins to lose its regular circular form; some part of its margin is observed to make a different curve from its original one, and at first to assume more of a straight line. This may take place in one or more parts of the margin, and for a greater or less extent will cause the pupil to assume different figures." "Some portion of the pupil also, generally at its upper part, retains its natural form in all stages, for a greater or less extent. Within this space, it moves a little under the influence of varying light, and also expands under that of the extract of belladonna."—pp. 8, 9.

"The surface of the iris is generally observed to undergo some remarkable changes as to colour; often it assumes a yellowish or amber tinge; sometimes there is a dark reddish, or somewhat coffee-coloured circle about its ciliary attachment, and often there is the same appearance round the border of the pupil: in some cases, the discolouration is confined to the parts most occupied by the diseased action, or shews itself in irregular streaks or patches, on different parts of the surface." "As the disease proceeds, the contraction of the pupil becomes more remarkable, particularly about where the morbid action first manifested itself." "Vision gradually grows more imperfect, and rather severe darting pains are often felt in the ball of the eye, at the bottom, and round the external parts of the orbit." "Nearly in this state the symptoms may remain for from six to eighteen days; they are seldom protracted beyond the twentieth, without some appearances of the second stage shewing themselves; and it is unnecessary to remark, that at this period adhesions may form between the edge of the iris and the capsule of the lens, without being immediately perceptible.

This circumstance it is of some importance to know with certainty; for if it has occurred, the disease has already passed into its second stage. It may be ascertained by bringing the iris under the influence of the extract of belladonna: the adhesions, if any exist, are thus put on the stretch, and brought to view."—pp. 11, 12.

"In the second stage we will (shall) have to notice an increased contraction of the pupil, which becomes more irregular, puckered, and inverted; and often a black fringe appears round its border, as if from a detachment of portions of the pigmentum nigrum. We will (shall) also generally see one or more angular points proceeding from it towards the capsule of the lens, and these mark where adhesions have formed between it and the capsule. The whole surface of the iris is often observed to become conical, and to diminish considerably the limits of the anterior chamber. About this time also, in a few instances, enlarged vessels may be distinguished ramifying superficially over it."

"In many cases there is a very singular and characteristic symptom, namely the formation of one or more small tubercles on some part of the iris. When these occur, there is always more pain and tenderness felt in the eyeball than usual: they commonly present themselves at or near the pupil, and on that part where the morbid process is most active. Now and then they are seen on the surface of the iris, between the pupil and its ciliary attachment. They are found from the size of a large pin's head to that of a small split pea: sometimes there appears but a solitary one, at others, we see two or more of them unconnected; but in some cases a number are clustered together, and project into the pupil, so as nearly to fill it up, or protrude forward in the anterior chamber: at one time they hang pendulous, at another they are attached by a broad base: when small, they are of a dark red colour; but when large and prominent, they are more or less white at the apex, while about the base the redness continues. By closely examining them in this latter state, we shall distinctly observe that the inflamed superficial membrane of the iris is reflected over them, and forms their anterior covering; and thus when the tubercles are small, their covering retains the redness caused by its state of inflammation; but when they are larger and more pointed, it becomes transparent about the apex, where, as happens in a common pustule, their whitish contents are visible."—pp. 13, 14.

"With regard to their nature, from what I have observed of them, I would conclude that they are either pustular, or for the most part formed of a purulent deposition. Having never found them attendant on any other kind of inflammation or morbid action, I have always looked on them as characteristic of venereal ophthalmia. During the active stages of the disease, the pupil still shews a tendency to contract, until at length it scarcely exceeds in diameter a large pin's head. The opacity likewise spreads and becomes more dense in the capsule of the lens; and finally, nearly all power of vision is suspended."—p. 16.

In one case Mr. Hewson was clearly able to distinguish that the opacity extended into the body of the lens. He also states, that he has little doubt that the choroid and retina are more or less involved in the disease.

"About this period, if no efforts are made for the relief of the patient, the other eye may be attacked, and the symptoms will hold in it nearly the course that has been already represented."—p. 18.

In a few cases of some years standing, in which no proper treatment had been employed, there was not any appearance of inflammation; the aqueous humour had regained its natural transparency; and there was only to be seen the contracted and adherent pupil, the opaque capsule, and two or three enlarged varicose vessels, like veins, running through the substance of the sclerotic.

Mr. Hewson has given a particular description of the abscesses which form among the deep-seated parts of the eye in this disease, and generally terminate in the destruction of the organ. According to him,

"The first symptoms are some degree of œdema and swelling on the forepart, and on one side of the eyeball, immediately behind the ciliary attachment of the iris. At this place a distinct tumour soon forms, which in a few days becomes pointed, white, and soft at the apex; when opened, the matter oozes but slowly from the orifice, and will be found darker in colour, and more thick and tenacious than common pus." "While the abscess is making its way externally, it at the same time points towards the anterior chamber. A portion of the iris is protruded so as to come nearly in contact with the cornea: this soon gives way, and the same kind of tenacious matter is deposited in flakes into the anterior chamber, but does not subside in, or mix with the aqueous humour, as in common hypopion. Both iris and cornea are quickly destroyed by sloughing and ulceration; the aqueous humour, lens, and part of the vitreous humour are evacuated, the sclerotic contracts about the vacant space, and finally the anterior chamber is obliterated."—pp. 20, 21.

Constitutional Symptoms.—The venereal ophthalmia may be met with in connexion with a variety of symptoms of a general affection, although it is occasionally the only one which can be detected. Mr. Hewson is of opinion, that when the constitutional symptoms are most strongly marked, those attending the ophthalmia will be proportionally severe. He has also remarked, that when mercury has not been used previous to the occurrence of the disease it has appeared in its worst forms; but the contrary, when the remedy has been employed to a certain extent. He acknowledges, however, that the worst and most unfortunate cases have been preceded by an irregular, inefficient, and protracted use of mercury, p. 25.

This ophthalmia is most commonly attended by some species of eruption, and "this is usually either of the papular or scaly kind; we are not, however, to credit the statement of a recent speculative writer, who would have us believe that it is easily joined with the papular."

When the ophthalmia is met with in combination with any of the more usual secondary symptoms of any venereal disease, it cannot, of course, require any great powers of discrimination to detect its real nature. When it is the only symptom present, the question certainly becomes somewhat more complicated; but even here the previous history of the case, together with an attentive investigation of the appearances which present themselves, cannot fail to assist materially in forming a conclusion.

"Amongst women," says Mr. Hewson, "we shall often find, that, in addition to the ophthalmia, the only circumstance leading to a suspicion of the constitution being tainted, is their having had repeated abortions or still-born children."

Among the exciting causes, Mr. Hewson particularly mentions wet and cold. He does not coincide with the opinion that the use of mercury creates a predisposition to the disease. "I have," says he, "*cæteris paribus*, as frequently met the ophthalmia where no mercury had been previously employed, as any other secondary symptom of lues venerea."—"The greater number of females who are infected by their husbands rarely use mercury until the disease shews itself constitutionally, and these are very frequent subjects of the ophthalmia." In some unpublished official military reports, too, with an examination of which the author was favoured, he finds it expressly stated, "that iritis was more frequently observed as a secondary symptom (without the use of mercury) than is known to happen after treatment with mercury."

We cannot allow ourselves to enter upon the diagnosis of the venereal ophthalmia from the diseases with which it may be confounded. These, according to Mr. Hewson, are, idiopathic inflammation of the iris, inflammation of the capsule of the aqueous humour, rheumatic and arthritic ophthalmia, and, lastly, ophthalmic symptoms caused by the use of mercury.

Mr. Hewson has noticed, and given some histories of, a peculiar form of iritis, bearing some resemblance to the venereal ophthalmia, and which he met with as one of the sequelæ of the contagious fever which has committed such ravages in Ireland. He throws some doubts on the existence of any peculiar ophthalmia connected with gout—principally because he has not met with any facts leading to such a conclusion. Although

the frequency of its occurrence has doubtless been much exaggerated by the German writers, the evidences of its existence are too numerous and too positive to be counterbalanced by the negative experience of an individual.

Mr. Hewson's opinions on the ophthalmic symptoms caused by mercury differ in many respects from those of some considerable authorities in this country. He denies that iritis can fairly be considered as depending on the use of mercury, and does not feel the doubts which Mr. Travers has expressed of the possibility of deciding "whether iritis is the effect of a morbid or of the mercurial poison." According to him, the true source of such causes is to be traced to a defective and inadequate mode of administering mercury; in consequence of which, besides other effects, it fails to exert its antisyphilitic properties, or to eradicate the disease from the constitution.

"This is no uncommon result of what is termed the alterative plan of treatment, which is confined to the administration of pills, and in which the patient is placed under no salutary restrictions; and ophthalmia, like other syphilitic symptoms, is no very unfrequent consequence of it."

"A minute investigation, however, into an extensive variety of cases, not alone impressed me with the opinion, that iritis, occurring under the circumstances above stated, is, with very few exceptions, connected with a syphilitic taint of the constitution, but also that the ophthalmic symptoms usually associated with the constitutional use of mercury are of a very distinct and different nature from the disease in question."—p. 47.

Mr. Hewson farther states, that his experience leads him to look on primary iritis as a very rare effect of the constitutional use of mercury. On the contrary, he has observed the external structures remarkably subject to be morbidly affected by it, and that without its manifesting any tendency of the same kind elsewhere. In farther proof of this position, he states, that where the scrofulous ophthalmia of children has proved most unmanageable, he found that this arose from too free an exhibition of calomel as a purgative.

"From a minute investigation also," says he, "into the cases of a great number of soldiers who had been discharged the service on account of the consequences of the ophthalmia, from which our troops have for so long a period suffered, which consequences are known to be principally confined to morbid alterations in the conjunctiva and cornea, I have been able to discover few amongst them who have not evinced more or less of a mercurialized habit; sometimes brought about by mercury being exhibited with this design; sometimes the effect of a careless and unrestricted use of mercurial purgatives; and often of repeated mercurial courses, undergone

within short periods, for venereal complaints. In short, since my attention has been drawn to this subject, whenever I meet an ophthalmia that has passed into its latter and most intractable stages, particularly when accompanied with a thickened and warty conjunctiva and vascular cornea, the necessity has more and more forcibly struck me of inquiring whether or not the patient has used mercury to any extent, either in the previous treatment of the ophthalmia, or for any other purpose; and in all cases where I find any symptoms indicating its morbid activity in the system, I conclude it to be utterly vain, in this state of health, to attempt the relief of the ophthalmic symptoms by any topical remedies or treatment."—pp. 51, 52.

We have but little space for noticing the treatment recommended by Mr. Hewson; but, from the simplicity of its nature, this is unimportant. It is, in fact, merely a mercurial one, and the only possible question is as to the particular mode of carrying it into effect. That which he advocates is the exhibition of calomel, combined with opium, and given in the dose of two or three grains night and morning, or oftener if necessary. The opium is useful in allaying the pain, and also, by preventing the rapid passage of the calomel by the bowels, hastens its constitutional action. If the mercurial action does not shew itself, after pursuing this treatment for six or eight days, frictions may be combined with the pills, until ptyalism is fully established. In the treatment of this ophthalmia, confinement can be less dispensed with than in that of any other symptom of lues venerea. The patient may be saved the inconveniences of blood-letting or blistering, as they do not afford the smallest benefit, nor will they allay a single distressing symptom; and the same may be said of purgatives, in which respects the venereal ophthalmia differs from all analogous affections.

Mr. Hewson discourages all local applications, excepting warm and anodyne fomentations when the pain is very severe. The use of the extract of belladonna is necessary, in order to prevent the contraction or closure of the pupil; but the author asserts, that, if used while the symptoms are acute, it creates uneasy sensations about the eye, and produces irritation; he therefore advises that it should not be resorted to until the symptoms are in some measure on the decline.

Mr. Hewson merits much commendation for having collected and arranged the scattered knowledge of the disease he has treated on; he has also personally contributed much new and useful information, and, for the most part, communicates his ideas in an intelligible and unaffected manner.

ART. V. *De Pulsibus Organicis, Diagnosticis et Prognosticis, necnon de eorum insigni utilitate in Morborum Therapeia derigenda specimen, cum inconibus.* Aug. Taurinorum, 1823. 8vo. pp. 262.

As our English physicians, in general, are rather careless in their examination of the pulse, we have been induced to take some pains with our review of this singular composition; and should practitioners, in consequence, turn a little more of their attention to this part of medicine, neither the author, we conceive, nor his reviewers, will have written in vain.

M. Sacchero, before entering on the proper subject of his work, has favoured us with a few short notices of the principal pulse-masters who have appeared on the stage of medicine, from the age of Galen to the present time. Galen has written largely on the pulse, and it is thought that the Chinese originally derived their knowledge of it from him. Aëtius, Avicenna, and other old physicians also, it is well known, paid much attention to it; but the foundations of the pulse system, it must be confessed, were not a little loosened by the physicians of the mechanic school, Schellama, Bellini, Frederic, Hoffman, &c,; till, first, Solano, and then Nihel, Bordeu, Fouquet, and other great men, re-established them, and endeavoured to prove that the pulse was capable, in general, of revealing the hidden diseases of internal organs. Following their footsteps, Gandini, a Genoese, and Wescht, a German, published, nearly at the same time, their celebrated works on this part of medicine. The knowledge of all these men, in so far as the pulse was concerned, rested nearly on the same basis, the figure of the beating artery. Within these few years past, Clay, a French physician of some eminence, invented a new method, which consisted in the observation both of the anterior and posterior pulsations. All these doctrines, our author's late friend Gandini, professor of natural philosophy at Alba, understood so perfectly, that by means of the pulse alone, he scarcely ever erred in the diagnosis and prognosis of disease.

M. Sacchero informs us that his work had been for some time ready for the press, when a posthumous treatise on the pulse, by Burserius, and another by a M. Lavy, made their appearance; but in no way did they interfere with his. That of Burserius, he says, scarcely notices the above doctrines; whilst that of Lavy is little else than a farrago of repetitions.

"As to myself," we use our author's own words, "if any one be disposed not to credit my assertions, let him go with me to the

patient's bedside, and I will prove to him that I have written nothing but what is true. But I most earnestly entreat the younger part of the profession to peruse, with unceasing study, the works of the above mentioned celebrated authors; and they may rest assured that their labour will be richly rewarded. These works like a bright star, will guide them to the discovery of almost innumerable disorders of the human frame, nor will they ever repent their having followed me. Let them not, like the ignorant, be startled at the difficulty of obtaining this knowledge: let them only use diligence and they will find nothing more agreeable, nothing more delightful, than by means of the pulse alone, to detect, as it were, miraculously, the hidden diseases of organs, to foretel death, or safely promise to the patient a speedy recovery."—p. 21.

But though he speaks thus confidently, our author by no means flatters himself that he has brought the doctrine of pulses to perfection; on the contrary, his acquaintance with it, he confesses, is extremely moderate.

The physician should be intimately acquainted with the motions of the heart in the healthy state, as they are then regular; for in this way only can he form a just conception of their morbid aberrations; and the motions of the heart being common to the arteries, and these being most easily felt at the wrist, it is upon its arteries that the whole doctrine of organic pulses rests. But that the person who feels the pulse may understand all its modifications, it is necessary that his sense of touch should be perfect.

"On this account," says our author, "let the physician carefully shun every thing that may harden the cuticle of the fingers, such as playing upon stringed musical instruments, or using mechanical tools: he should know, that the greater part of this knowledge depends on the sensibility and proper application of the fingers. Every science has its intricacies and its toils: so has the doctrine of the pulse; but let the physician give himself up to it entirely, and his hopes will not be disappointed. Every one may not acquire it quickly, but I believe that every person, with long practice, patience, assiduity, and a strict observation of the proper rules, may become sufficiently acquainted with it; and I think that hospitals and numerous patients, are the only schools of this art. For, by the same means that an expert musician gradually accustoms his ear to perceive the slightest discordances of sound; by the same means that a blind man so improves his sense of touch that he can distinguish colours; so, by serious attention, and frequent examination, even a young physician will at length accustom his fingers to distinguish every modification of the pulse. But though I bestow so much praise on the doctrine of pulses, I am not one of those who think that the pulse never deceives us, and that it alone is a sufficient guide in the practice of medicine."—pp. 25-7.

"We now proceed," says M. Sacchero, "to lay down certain rules, which should be observed previously to the examination of the pulse. As his appearance on his first visit usually occasions anxiety and some degree of alarm in the patient's mind, and an instant change in his pulse, the physician, agreeably to the advice of Celsus, should not lay hold of the arm immediately on his arrival, but with a cheerful air should sit down by the patient's bedside and inquire how he does, and try to dissipate alarm by some complimentary conversation, and then proceed to the examination of the pulse.

"With regard to posture, Bordeu thinks that the patient should lie horizontally on his back, with his head a little raised, and Fernelius tells us that his hand should be neither raised nor depressed, nor confined in any manner; but should lie in an easy and natural position, on its lower or ulnar edge, or on that side which corresponds to the little finger. The temperature of the physician's hand should be agreeable, and if it is cold on his arrival, he should warm it carefully.

"We must next inquire whether the patient has just awakened out of sleep, or have lately taken food, drink, or medicine; whether he has an issue or ulcer any where about him; whether he has been agitated by passion; or whether an exacerbation of his disease may be soon expected. We should also ascertain the stage of the disease, and the age and temperament of the patient, &c.; for, as all these affect the pulse, if we do not attend to them, our judgment of the case will be much more difficult and obscure. We now proceed to the examination of the pulse. Galen taught, that the arteries of the wrist are to be preferred for this purpose, either on account of convenience and decency, or, because the artery is there of sufficient length, and able, from its lying on the arm bone, to resist pressure: this rule the detectors of organic pulses scrupulously inculcate. The sick man being now enjoined to silence and repose, let the physician, with his right hand, lay hold of the patient's left wrist, or of the right wrist with his left hand, and then let him place upon the artery his four fingers parallel to each other, so that the fore-finger may lie in the depression which is betwixt the wrist and the styloid apophysis of the radius, and let that finger's external side rest upon this apophysis; but let the rest of the fingers be placed on the artery in succession. This position of the fingers seems to be quite essential to the discovery of organic characters, since these principally consist in the elevation or depression of some part of the artery placed under the fingers, which part, by pulse-masters, is named the beating or *pulsating space*. One may be apt to believe that this arranged position of the fingers is exceedingly difficult; but it will be rendered easy by habit and practice. We should vary the pressure of the fingers, taking care, however, not to alter the artery. The pulse, likewise, must be touched at intervals, lest the sense of touch should be blunted by the continued pulsation of the artery; but it is only by

experience that the young physician will learn, gradually, how to apply these rules to the different kinds of pulses. The patient's pulse should be felt as often as possible; and, at least, forty or fifty pulsations numbered in each wrist. The carelessness of physicians in this respect, is thus noticed by the celebrated Hoffman: It is certainly surprising, that our medical practitioners, when they come to the patient's bedside, merely, for form's sake, touch the pulse so very gently, that they scarcely wait till they have felt two beats, whereas an inequality or intermission is very often not noticed till after ten, or more pulsations. Those men who have attained to great eminence in the art, wisely recommend that the pulse should be felt in both wrists, on account of the difference which is generally observed betwixt them, and the benefit we may thence derive in forming our diagnosis. Taught by experience, I also recommend this practice; for I have several times, from the pulse, told the patient on what side of his head he felt pain: besides, the hepatic pulse is more evident in the right wrist, and the splenic pulse in the left; and in hemicrania, likewise, the pulse of the pained side is more characteristic of the disease than in the opposite one. But when the physician examines the pulse, he should run over, in his mind, all the characters of organic pulses, that he may be able to refer, at once, to the true one."—pp. 31-7.

M. Sacchero now mentions the changes which the pulse undergoes in a state of health, from age, sex, temperament, sleep, seasons, climate, air, constitution, stature, motion, baths, food, passions of the mind, and preceding diseases; but we think it quite unnecessary to follow our author upon all these subjects. The pulse of children, though so exquisitely sensible to the slightest circumstances, our author has found eminently serviceable in the diagnosis of infantile disorders: which is the more worthy of notice, as in such cases most physicians are in the habit of paying very little attention to the pulse. The pulse of manhood is his standard pulse; while that of old age is less to be depended on as a diagnostic criterion. Women have a pulse peculiar to themselves. The blood-vessels, also, of people who work hard, acquire a degree of rigidity approaching to that of old age; and, consequently, in them the modifications of the pulse are less easily detected and are attended with more uncertainty. The *ingesta*, whether solid or liquid, affect the pulse in a very striking manner; but if any person wish to become well acquainted with the pulse of digestion, M. Sacchero recommends him frequently to visit convalescents or delicate women, as, on account of their more exquisite sensibility, they are readily affected by whatever is taken into the stomach, and show very distinctly those modifications of the pulse which belong to it.

Our author now proceeds to the examination of the vulgar *differences of pulses.*

"Following," he says, "the very celebrated Wescht, we shall consider some of these as appertaining to the pulsation, and others to the pulse. With regard to the pulsation, the first difference is taken from the time of motion; for either the artery is contracted much in a short time, and then the pulse will be *quick, rapid, hurried,* (*celer, velox, citatus*), or a longer time intervenes betwixt each of its dilatations, and then the pulse is called *slow,* (*tardus*). The second difference is from the distention of the artery; whence the pulse is *great,* (*magnus*), if the artery is enlarged in breadth, but if deficient in that respect, it is *small,* (*parvus*); and again the small pulse is sometimes said to be *like a thread, very slender, like a hair, quick and low, like the creeping of an ant,* &c. (*filiformis, exillissimus, capillaris, formicans*). The third difference is from the vigour of the beat; for instance, the pulse is *strong,* (*vehemens*) as often as it, in a manner, displaces the hand of the person touching it; but the pulse is *weak,* (*debilis*) when its beats, instead of pressing against the fingers, are rather languid. The fourth is from the quality of the tunics or coats of the artery; thus the pulse will be *soft,* (*mollis*) if the artery appear tender and fleshy in its diastole; but *stiff* or *hard,* (*rigidus* vel *durus*) when its coats are like leather and dry. The fifth is from the quantity of the circulating fluid; for instance, if the blood is in great abundance, and dilates the artery very much, the pulse is *full* (*plenus*); but if the pulse yields to the slightest pressure, it is said to be *empty, void,* (*vacuus, inanis*). Can a *full* pulse be distinguished from a *great* one? Of the differences which respect the pulse itself, the first depends on the length of time which elapses betwixt the beats; thus the pulse is *frequent,* (*frequens*) if the time is short; but *rare,* not frequent, (*rarus*) if a longer space intervene. The second depends on the pulse being in harmony with the age, temperament, sex, &c. of the patient: for if it is so, the pulse is called *accordant,* (*eurhythmos*) but if otherwise, *discordant* (*arhythmos*). The third depends on a comparison of the beats, for if these are equal, they constitute an *equal* pulse; (*æqualis*) but if at one time they are more rare, at another more frequent, the pulse is then termed unequal, (*inequalis*). The fourth difference respects the *order* of the beats; whilst these are equal and regular, the pulse is *regular,* (*ordinatus*); but when there are two great and two small beats, it will then be *irregular,* (*inordinatus*). The differences with regard to equality and order are often observed in organic pulses."—pp. 53-4.

We have been induced to give the above passage at full length, that there may be less obscurity in what follows.

In giving an account of organic pulses, we shall, at the risk of being thought dry, leave out as far as possible the author's theoretical observations as comparatively of small importance.

"The illustrious Fouquet," he informs us, "calls that an *organic* pulse, which makes known to us the increased action or the morbid affection of some organ. According to this definition, we must admit, that even in a state of health, there are certain organic modifications of the pulse, though slight and transitory, which may be observed during digestion, excretion, sleep, &c.; we may say, therefore, with Wescht, that a healthy pulse is that which undergoes a change with every change of an organ, and in which there are organic characters, but in a state of the greatest simplicity and uniformity. The *characters* of organic pulses are observed in the varied impression which is exhibited by the surface of the beating space, sometimes under one, sometimes under more than one finger, and sometimes in their interstices; and these impressions consist of eminences or waves more or less evident, of the elevation of some part of the artery, or of other modifications to be described in their proper places. Such is the doctrine of Fouquet. Another method rather more difficult, perhaps, but yet not without its use, has been invented by Clay, a French physician of some note. He distinguishes two orders of pulsations in the pulse, and he calls those which are next the wrist *anterior*, and the others which beat a little behind them towards the elbow, *posterior*; and from the number of the anterior pulsations, (which is generally equal to the posterior ones) he forms his conclusions with regard to the affection of this or that organ. Although the pulse is really so distinguished, as I have myself observed, yet I think the opinions of Fouquet are clever, and much better adapted to practice. Pulse masters in general, divide the pulse into *superior* and *inferior*, according as it depends on an organ situated above or below the diaphragm; to the first class, therefore, belong the pulses of the *head, throat, chest*, and *heart*; to the second, those of the *stomach, liver, spleen, intestines, kidneys, bladder, hæmorrhoids*, and *uterus*; but that of the *skin*, though generally enumerated amongst the latter, should with more propriety, we think, be classed along with the *superior* pulses. In the superior pulse, the motions of the artery are so superficial, that they may easily be distinguished by a light application of the fingers, and need very little pressure. But in the *inferior* pulses, the artery appears to be so much more deeply seated, that it must be pressed firmly with the points of the fingers. According to Clay, the superior pulse is distinguished by two anterior pulsations; the inferior, by always more than two. Morbific causes attack sometimes one organ only, and sometimes several organs at once, therefore an organic pulse is either *simple* or *compound*. Besides, a pulse is different in the beginning of a disease, from what it is during its decline, and when near its close; hence the division of pulses into *acritic* or diagnostic, and *critical* or prognostic."—pp. 58-62.

M. Sacchero now proceeds to the description of diagnostic pulses.

"The character of the capital or cephalic pulse consists in the

elevation of the anterior part of the artery in that situation of the pulsating space which is opposite to the wrist, and which corresponds to the fore-finger; the pulsation is felt at one time under a more acute, at another, under a more obtuse angle, the rest of the artery, under the ring and little fingers, remaining parallel to its plane. Clay has assigned to it two anterior pulsations. It has always joined with it a greater or less degree of irritation; it is generally tense, hard, vibrating, strong, and seems as if it would drive off the fore-finger, but it is never critical or of salutary import: sometimes, when in union with fever, it is frequent and quick: at other times, when free of fever, it is slow. To know it, the artery needs hardly any pressure, for it is exquisitely *superior*. If the interior of the head is affected it has a greater degree of irritation, and towards the wrist it presses more keenly against the finger; but if the external parts are diseased, it seems to be higher and softer. In detecting the idiopathic affections of the head, the cephalic pulse is a safer guide; for it is always present, in both active and nervous headache, in phrenitis, apoplexy, mania, tetanus, inflammatory intermittent fever, difficult dentition, hydrocephalus, &c.: it generally precedes apoplexy, and delirium: when there is a remission of the characters of this pulse, the cause of the disease is slight; but their permanency argues a local cause difficult of removal. Hence the propriety of the physician's attention being directed to its various gradations."—pp. 62-8.

When headache is sympathetic the cephalic pulse is absent or but slightly marked, the prevailing pulse being that of the affected organ. M. Sacchero informs us, that when it is in conjunction with the guttural or pectoral pulse, it generally prognosticates evil; and that, when headache and pregnancy come together, the cephalic pulse will sometimes prevent us from detecting the pregnancy of unmarried women. The importance of this pulse, he says, must be evident when we consider how often physicians of the greatest eminence have been deceived with regard to the causes of head-diseases. The truth of this position has been frequently proved by dissection.

"We should speak now," says our author, "of the nasal pulse, but it will be better to defer its consideration till we come to the prognostic pulses. The guttural pulse is distinguished by an eminence, or a kind of little wave, formed by the anterior part of the pulsating space, and which is like the segment of a circle, while the rest of the artery retains its cylindrical form; and this elevation is perceived under the external side of the fore-finger, a little below the cephalic pulse, holding as it were a middle place betwixt it and the pectoral pulse about to be described. Besides this, something is felt, in the part of the artery next the finger, like a moveable little knot, or very thin ring surrounding the artery, and which follows the progressive motion of the column of blood, and there is gradually lost. This pulse is generally hard and tense, or approaching

to convulsion, unless when it is critical. Clay gives it two anterior pulsations, rather farther removed from each other than in the cephalic pulse. That it may not be confounded with the cephalic pulse, we should carefully observe, that its eminence is not so elevated as that of the cephalic, and that it strikes not the point of the fore-finger, but its outer or cubital side. This pulse frequently accompanies every kind of cynanche, if we, perhaps, except that of the parotid, and also the spasmodic constrictions of the throat which occur in hysteria, asthma, and angina pectoris, varying occasionally in its form, according to the nature of the affection on the diathesis; but we are not always able to distinguish by it alone, whether it is the pharynx, larynx, or œsophagus, which is principally affected."—pp. 70-3.

"When the pulse in the middle of the pulsating space is elevated with a considerable expansion like a bow or hill, and when it occupies the vacuity betwixt the fore and middle fingers, touching softly the external side of the former and the internal side of the latter, it will be proper to call it pectoral. For the most part it is exquisitely *superior*; its pulsations are quite distinct, often slow and equal; its other modifications correspond to the stage and vigour of the disease. Clay distinguishes two anterior pulsations in it at a greater distance from the posterior than in the other superior pulses. The pectoral pulse is hard in pleuritis, hæmoptysis, acute catarrh, asthma, cough, wounds of the chest, &c. It is larger and softer in peripneumony and pneumonia: it becomes more contracted and almost *inferior* in the paroxysm of spasmodic asthma. In suppurations of the chest, it has a kind of obscure starting, (*subsultus*) joined with irritation, and it has a smaller eminence."—p. 74-5.

This pulse is natural to some people, and it often precedes diseases of the chest, and remains some time even after their resolution. An exact acquaintance with it is often of essential service in the diagnosis, prognosis, and cure of diseases; coughs, for instance, frequently arising from causes no way connected with the chest.

The cardiac, or heart pulse, which M. Sacchero claims as a discovery of his own, has much resemblance in figure and situation to the pectoral, but it may be distinguished from the latter in having only one anterior pulsation; and besides, the pulsations are at a less distance from each other. The sensation which it communicates to the fingers may be aptly compared to the stroke of a pendulum oscillating betwixt the fore and middle fingers, and touching smartly the external side of the first and the internal side of the second. Its general modifications are, frequency, vibration, sometimes intermission or inequality, especially in one or other of the wrists, and a smaller dilatation of the artery than in the pectoral pulse. It is ob-

served in the diseases of the heart, pericardium and blood-vessels; and we think that it is often felt in the intervals of intermittent fevers.

Such is our author's account of *superior* pulses. He proceeds next to the *inferior;* and begins with the *Gastric* or stomach pulse.

"The following are its characters: a small pyramidal eminence rising up betwixt the fore and middle fingers, the base of which appears to be deeply seated, and its point as if it were cut off or rounded. Clay gives it three anterior pulsations. It is less elevated than the superior pulses, whilst the rest of the artery preserves its cylindrical form, and is very firm and contracted, with some degree of irritation. This pulse often appears after a person has taken food, and the increased action of the stomach has power to alter the characteristic pulse of another affected organ and make it compound. In this pulse there is likewise a kind of ascent or descent, the pyramidal eminence sometimes extending itself and striking the external side of the fore rather than the internal side of the middle finger."—pp. 90, 91.

Our author pretends to discover by certain modifications of this pulse, whether the upper or lower orifice of the stomach is the part affected. It allies itself with almost all other pulses; but, if we except the hepatic, it may be easily distinguished from them. The important part performed in the animal economy by the stomach must, our author thinks, render an acquaintance with this pulse very valuable.

"The eminence," says M. Sacchero, "which distinguishes the hepatic pulse is likewise felt in the space lying betwixt the fore and middle fingers, but it is not so elevated as in the one just described, being tighter and more contracted; indeed it might be compared to a small inferior pectoral pulse; but when the artery is more tense the pulsations are for a little while irregular. The three anterior pulsations given to it by Clay are set very close together, and are at a less distance from the posterior ones than usual. It is often in connection with the pectoral pulse, but may be distinguished from it by being much lower, and more easily felt in the right wrist, and by having three anterior pulsations. The affections of the liver being often terminated by a bleeding at the nose, a hæmorrhoidal discharge, or a diarrhœa, its pulse is often associated with the nasal, hæmorrhoidal, or intestinal pulses. But with attention to the characters of individual pulses, their compositions will easily become known. —pp. 94, 95.

In the opinion of our author, this pulse also is of great importance, the diagnosis of hepatic complaints being often so extremely difficult.

"The *splenic* differs from the gastric and hepatic pulses in this,

that its eminence rises higher betwixt the finger than theirs, and in a vertical direction and that at its base, on the side answering to the middle finger, it has a kind of incision or notch, while on the side next the fore-finger it has an arch not unlike that of the pectoral. This character of the pulse is much more distinct in the left wrist; and Wescht will have it that the artery has less firmness and is softer than in the hepatic pulse, and that every second or third beat is slightly irregular."—p. 93.

This pulse is found frequently in conjunction with the intestinal. Our author has observed it in most of the diseases of the spleen, and has been able by its means to detect very obscure disorders of that organ.

The three pulses last described go under the name of epigastric pulses. We come now to the remaining *inferior* pulses, the abdominal. These pulses in general are distinguished by the depth, hardness, and tightness of the artery, and also by a peculiar inequality and vivacity of its pulsations :—

"The intestinal pulse is characterised by a very great constriction of the artery, particularly in that part of the pulsating space which answers to the point of the fore-finger, for here, it can hardly be perceived; but it beats deeply behind the middle and ring fingers, giving under the first of these such a sensation, as would be afforded by an oblong sesamoid bone passing through the artery. Clay has observed four anterior pulsations in it. Sometimes, as in spasmodic colic, it is like a small thread of considerable hardness : at other times in acute entiritis, particularly when that disease is verging to suppuration, it becomes in some respects fuller under the middle finger."—pp. 100, 101.

It detects the various diseases of the intestines, and cannot well be confounded with either superior or inferior pulses, as it strikes no other than the middle and ring-fingers. The pulse which attends ascites has some resemblance to the intestinal, except, that as the disease increases, the artery becomes harder, tender, and like a notched iron thread, seeming almost to emit a slight noise. But when ascites has reached a great height, this peculiar pulse is united to the pectoral. Our author is also of opinion that the pulse which attends dysentery is an intestinal one; but in addition to the intestinal characters, it gives under the fore-finger a feeling as of little balls rolling, or of a feather expanding itself widely. The intestinal and gastric pulses are often intimately combined in gastric fever, cholera morbus, and even in natural digestion; and it is united to the uterine pulse in the uterine colic which precedes difficult menstruation.

"What," says M. Sacchero, "is generally called the urinary pulse, we would also call the renal or lumbar pulse, for we have felt it in stranguary, diseased kidney, and lumbago. It has much

resemblance to the intestinal, only that its beats are more evidently felt under the ring-finger; often irregular, it sometimes, in painful contraction of the bladder, is deep and constricted, and at other times, in lumbago, it seems to approach to the cutaneous pulse; but, with all this, its beat is always under the ring-finger. It is often met with in advanced pregnancy and in uterine affections."—pp. 105, 106.

"In the hæmorrhoidal pulse, the artery beats deeply under the fore-finger, giving a sensation as if particles of sand were floating in it, and more perceptibly in the time of the hæmorrhoidal flux, whilst we observe a kind of expansion, like a small pectoral pulse, under the middle-finger, and a contraction under the ring-finger. Clay affirms that this pulse, likewise, is distinguished by the general characters of the intestinal pulse, with the addition, however, of a swelling of the artery, something like that of the pectoral pulse." —pp. 107, 108.

It is sometimes joined to the uterine pulse, but it may generally be distinguished by its vibrations. Hæmorrhoids being very frequent where our author practises, he has often detected them by means of this pulse alone.

"The uterine being an inferior pulse, stronger pressure is necessary in examining it. It constantly strikes the fore-finger in a vibrating manner, but the vibration varies in conformity to the disease or condition of the uterus and its parts, which it predicts; and it has also pulsations under the ring-finger, probably from the connexion which subsists betwixt the uterus and loins. However, the pulsation is generally tighter and deeper than that of the lumbar pulse."—p. 110.

Clay gives five anterior pulsations to this pulse. In a stout girl or matron, during the time that blood is oozing from the vagina, the uterine pulse is indeed vibratory, but it has a soft feel while the globules are flowing under the fore-finger; if we carefully attend to this, we may be able effectually to remedy those disorders which take their rise from a sudden suppression of the menses. In menstrual retention, the uterine pulse has its usual marks, but they have more than ordinary irritation, and the pulse itself is constricted, and, as it were, contracted, and there is generally some other organic pulse in connexion with it.

"In pregnancy," says M. Sacchero, "besides its ordinary marks, this pulse has serrated, styliform, vibrating pulsations, which are also more frequent than usual, and seem to rise from a considerable depth. These modifications are very perceptible during the first week after conception, but are less so in the following month, again, however, becoming more conspicuous after that time. In proportion now as the fœtus increases in size, the diagnostic signs of pregnancy in the pulse become so well marked, that we can not only

detect the pregnancy, but can tell the exact time that has elapsed since conception. In the last months of pregnancy, the uterine pulse becomes so dilated, as to have a resemblance to a *superior* pulse; but this is occasioned by its then gradually losing its diagnostic, and assuming a prognostic character."—pp. 116, 117.

The pulse of the lochia is nearly the same as the menstrual pulse, only that it is every way larger, and becomes unequal, or even intermittent, if the discharge is in the slightest degree interrupted. We must not follow our author in his description of the pulses of abortion, fluor albus, &c., which differ little from the general character of the uterine pulse; but we shall give a short case, illustrative of his pulse-knowledge, and as a specimen of the numerous cases which are scattered through the volume.

"In the month of April, 1818, a lame unmarried woman, in her twenty-fifth year, came and consulted me about her menses, which, she said, had been stopt for some time. That I might at once know the real state of the case, I put my hand to her wrist, and, finding the pulse of pregnancy, I inquired if she had had illicit connexion with any man. She affirmed she had not; but, notwithstanding, I would not give her any emmenagogue; and, in six months after, the poor creature died in child-bed."—p. 122.

"The cutaneous pulse is exquisitely *superior*, and strikes all the points of the fingers in a wavy manner, producing several arches in the pulsating space: according to Clay, it has four anterior pulsations, which seem to grow out of each other in succession. It is easily distinguished from other pulses, and is felt in rheumatism, inflammation of a joint, gout, all eruptive fevers, leucophlegmasia, anasarca, the sweating stage of ague, or in the symptomatic sweat of continued fevers, in wounds of the extremities, or the tetanus which rises from them, &c. In these cases it has commonly some degree of irritation, is rather hard, and often unequal or contracted; when it becomes soft, it is a favourable symptom. The utility of the cutaneous pulse is unquestionable, as the sympathies of the skin are so constant and extensive."—p. 128.

When several organs, which not unfrequently happens, are in a diseased state at the same time, each of them commonly gives the marks of its affection in the arteries at the wrist; and this is the origin of the compound pulse. It is, no doubt, difficult to distinguish such pulses; but all difficulties will vanish if we make ourselves intimately acquainted with the simple pulses. It is almost needless to observe, that the more complicated the pulse, the more dangerous is the disease.

M. Sacchero now makes some observations on sthenic, asthenic, and irritative diseases, and concludes, that the doctrine of organic pulses is of great utility in all of them, but particularly in the last.

"As the blood enters the fabric of every organ, the first effect of disease must necessarily be perceived in the sanguineous system; hence the excitement of fever or inflammation, in which the pulse is generally quick, frequent, hurried, hard, or dry, or, as it were, convulsed; however, even then, an organic modification may be almost always observed, unless, at the coming on of the disease, the pulse be compound, or at times confused, especially if several parts of the body are diseased at once. Bordeu, Fouquet, Gandini, Wescht, and others, have named this the pulse of *crudity* or irritation. As every diathesic disease is divided into the three stages, of increase, state or height, and decline, so the pulse, which, at the commencement of the disease, was in a state of irritation, gradually becomes free, dilated, full, moderately strong, and exquisitely organic, and then it is called the pulse of *coction*. When it happens that the physician, by the abstraction of a stimulating cause, can remove hypersthenic or incipient inflammation, the pulse soon returns to its natural state, and thus portends the resolution of the disease and returning health. But such a favourable event cannot always be expected; for, 1. When the disease is a contagious one, there must be an expulsion of the contagious matter. 2. Inflammations, which have lasted for some time, and have intimately affected the texture of organs, will not admit of resolution, unless there be an excretion of morbid matter from the place where it has been secreted, or some vicarious discharge; nay, sometimes they excite collections of purulent matter, the evacuation of which cannot be suspended without danger. 3. Some diathesic and irritative fevers do not cease, unless the disorder of a function be removed, and some preternatural evacuation excited. From all which circumstances, we must acknowledge the necessity, in such cases of crises, the approach of which will be indicated by the prognostic pulses about to be described. These will deserve all the attention of the physician, that the salutary efforts of nature may not be disturbed; that, if too weak, they may be assisted, and if too strong, moderated. The pulse of *coction* gradually assumes *excretory* characters, becoming strong, redoubled, unequal, or intermittent, with a vivid expression of organic modification. As was observed in the diagnostic pulses, these are perceived sometimes in both sides, and sometimes in one only; at one time they are simple, at another compound; or partly diagnostic, and partly prognostic."—pp. 136-146.

Such is the manner in which our author enumerates the changes of the pulse in acute diseases; but he has cautioned us, at the same time, not to believe that such changes always succeed regularly to each other. Many things will often, as is well known, prevent that; and to these the attention of the physician should be at all times carefully directed.

The subject of prognosis, in so far as it can be determined by the pulse, comes next under the consideration of M. Sacchero;

and here he follows the same plan as in his examination of the diagnostic pulses. Necessity compels us to follow his example, we fear not much to the gratification of our readers; but we give previously some remarks, or rather axioms, of his, on the general subject of critical pulses. 1. A critical pulse, when it is constant, seldom disappoints expectation. 2. It will be safe, too, when the organic characters remain for some time distinct. 3. At times, when certain characters have been observed, others are substituted for them, and then the crisis is changed. 4. Sometimes several crises are indicated at the same time. 5. If the crises are imperfect, the patients recover slowly. 6. In forming a prognosis, much attention must be paid to the strength of the pulse, the age and temperament of the patient, the method of cure, and other circumstances. 7. A fever stronger than usual often accelerates, and at times suspends, a crisis. 8. To form a correct prognosis, it is extremely useful to examine a patient's pulse several times a-day.

The *nasal*, the first among the critical pulses, has considerable resemblance to the cephalic pulse, only that it is soft and unconfined, and has a double beat, with a feel of globules running forward, and producing an oscillation in the artery. This reduplication of the pulsations, which distinguishes all hæmorrhagic pulses, has been not inaptly compared by Fernelius, after Archigenes, to a hammer rebounding from an anvil. When there is hardness and irritation in this pulse, it generally foretels a symptomatic epistaxis, which is useless, and sometimes even fatal; and in such a pulse the double beat is often wanting. When it has its genuine characters, and when the other symptoms which usually precede this crisis are present, we may almost to a certainty prognosticate an approaching epistaxis. We do not stop here to inquire into the causes which may hinder the event from answering to the prognosis, or to narrate the fatal consequences which ensue when an epistaxis does not follow the manifestation of the critical nasal pulse; and it is hardly necessary to observe, that an epistaxis, to do good, should take place during the decline of the disease. It is well known, however, that an excretion of mucus rather more copious than usual is sometimes substituted for epistaxis.

"The *guttural* pulse will announce a favourable crisis when, besides its organic characters, it has lost its irritation, and has acquired a softness, and a slight double beat, with some degree of frequency. It, like the diagnostic pulse of the same name, occupies a place betwixt the nasal and pectoral pulse; and if the latter are well known, it will not be difficult to distinguish the former. We know that it precedes tumours and abscesses of the parotids, even

when they are not critical, and when attended with some danger; but we cannot help thinking, that, in such cases, there is a degree of crudity in the guttural pulse. But it becomes critical whenever, in advanced cynanche, it shews that a resolution of inflammation or infarction may be expected by means of a thick mucous expectoration; or that pus, which has been formed in a diseased part, is to be evacuated. We rarely meet with this pulse in its simple state, and it is often combined, to the no small risk of the patient, with the pectoral or cephalic; for we take that to be a dangerous crisis in which there is coma, swelling of the parotids, or dyspnœa, &c., affections which are apt speedily to threaten life; on which account tumours of affected parts should be brought to suppuration as soon as possible; and if pus is already formed, it should be evacuated." —pp. 158-160.

According to our author, the pectoral pulse, when it is critical, is soft, full, equal, great, undulating and rare, with some degree of starting. As often as it makes its appearance in diseases of the chest, which have arrived at a state of coction, an expectoration may be expected, which will be favourable if the matter expectorated is white, light, and inodorous, and brought easily up, and in considerable quantity, and if there is a mitigation of fever; and if the urine deposits a thick sediment, and the skin is moistened with a gentle sweat. It is owing to this last circumstance that the cutaneous, itself a critical pulse, is often joined to the pectoral, which we have just described. On the other hand, the pulse which is deficient in strength, even though it may possess most of the above-mentioned characters, will give only false hopes; and, as Burserius has well observed, deceive both the physician and his patient. From a careful examination of the pulse in each wrist, M. Sacchero thinks that we may be able to tell in which side of the chest there is an abscess. As nothing can be of more importance than to prevent diseases of the lungs, we are urged to make ourselves intimately acquainted with the pectoral pulse, both in its organic and critical form.

Speaking next of the cardiac pulse, our author observes—

"If we compare the characters of the critical pulses already described, and those which are yet to be delineated, we may account in a just and easy manner for the double beat, as well as the inequality which is so familiar to them: more evident in the hæmorrhagic, less distinct in the nasal, guttural, and pectoral pulses, which prognosticate a mucous excretion, it presents no other modification to the touch than what would arise from a cardiac pulse more quickly contracted: for instance, each consists of two beats succeeding each other, in such a manner that the one appears to be anterior and the other posterior. If we add, that this reduplication of pulsations is united with the pulse of the part from which the

excretion is to take place, it will be evident that the double beat is composed of the cardiac, and one or other of the organic pulses; for example, of the cardiac and cephalic in epistaxis, and of the cardiac and uterine in hæmorrhage from the uterus. We have every reason to conclude, that the pulse with a double beat scarcely prognosticates any thing but an attempt of the heart to remove a superfluity of blood. But where only its mucous part is exuded or excreted, as in expectoration, or a critical discharge from the nostrils, throat, &c., the exertion and effort of the vessels being less, so are the reduplications in the pulse more moderate. The critical, cutaneous, and urinary pulses are distinguished by the inequality of their pulsations alone, either because a serous humour has an easier exit, or because they indicate merely the increased action of a natural function from some previous disease; indeed it often happens that an expansion and softness of the arteries are quite sufficient for these excretions. On the contrary, the intermission which is observed in the gastric and intestinal pulses, on the approach of their crisis, appears to be entirely passive."—pp. 166-168.

M. Sacchero believes that the cardiac pulse, which is often observed in the intervals of periodical fevers, announces the immediate return of a paroxysm; and hence he concludes that the proximate cause of these fevers is to be found in the heart and arterial system. Were we to follow him at length in his evolution of this doctrine, we do not think that we should add much to the amusement or instruction of our readers: we, therefore, merely give the author's summary of it in his own words:—

"1. Disorder in the function of the exhalant vessels may be styled the proximate cause of periodic fevers, and consequently it resides in the heart and arterial system. 2. The pulse which is felt in these fevers, provided there is no peculiar affection of any organ, has a greater resemblance to the cardiac than to any other, and by its presence we are able to prognosticate a fresh return of fever, or its relapse. 3. A crisis, whatever some moderns may say to the contrary, is almost always necessary for the removal of the fever. 4. To other intermittent fevers we should add an *habitual* one. 5. Peruvian bark removes periodic fevers by a specific action. 6. Having thus fixed upon the proximate cause of these fevers (No. 1.) we can more easily explain why they are so prevalent in spring, summer, and autumn, seasons in which the cutaneous system, according to Sanctorius, is more active and more sensible than at other times, and marsh miasma and vicissitudes of the air more frequent. 7. We conclude that the fevers of which we speak are intermittent, either because a crisis (No. 3.) generally comes on, and puts an end to the fever in each accession, or because frequently paroxysms recur by the laws of habit, or because an acute disease of the heart must necessarily have intervals, and abate in intensity, lest the powers of life be destroyed by its violence."—pp. 182, 183.

This passage, we conceive, is not likely to give the reader a

very high idea of our author's ratiocinative talent, or of his stretch of intellect in general; and will account for our having so sparingly noticed his speculations.

M. Sacchero has never observed a critical gastric pulse, unless we call that a *critical* one which accompanies the action of emetics. However, such a pulse has been described, in which the artery is contracted and tense, and besides its eminence, has a tremulous and convulsive motion, with some degree of inequality in its beat. It is united to the intestinal pulse in cholera morbus, and it is met with in certain cases of chronic vomiting.

The critical hepatic pulse would seem to be composed of the organic hepatic, and of the critical cutaneous pulses, especially in jaundice; but in critical evacuations from the liver, which pass downwards through the intestines, it is no easy matter to separate it from the intestinal pulse; only that the critical hepatic pulse is more easily perceived at the right wrist. Bordeu assigns to it a great degree of concentration, and an inequality of two or three successive beats, while the rest are quite equal.

When the intestinal pulse becomes fuller, more elevated, and unequal, it obtains its critical modification; being generally more frequent than in its organic state, and at one time appearing to rise high, and at another giving something like an explosion of the artery, a circumstance which indicates an approaching evacuation, particularly if there is also an intermission. From this alone, our author has several times predicted the approach of stools. This condition of the critical intestinal pulse, as it was confounded with the intermission which attends diseases of the heart, was looked upon by the ancients as a bad omen; however, several eminent physicians, as Prosper, Alpinus, Wierus, Hoffman, Riverius, and Morgagni, have observed that it may be occassioned by some cause residing in the intestines. Such a pulse is favourable towards the end of all gastric diseases, particularly if an evacuation of the bowels has taken place and relieved the patient.

With regard to the critical renal pulse, or that which prognosticates a flow of urine, our author has had so little experience of it, that he supplies its characters from Solano and Bordeu. These are, a softness and intermission of the artery; pulsations successively decreasing, so as almost to vanish, with the return afterwards of others equal and slightly salient.

The critical hæmorrhoidal pulse has the characters, which we have already assigned to the diagnostic, so greatly evolved, that the globules are more readily perceived under the fore finger, and that it approaches in some respects to the height of the nasal pulse, with which it might possibly be confounded, were it

not for the inequality common to the inferior pulses. Bordeu asserts that this pulse admits in its pulsations, besides the double beat, a formication, or kind of tremulous motion, by which it is principally distinguished from the uterine pulse.

The pulse which precedes or follows the discharge of blood from the vagina has much resemblance, as M. Sacchero informs us, to the diagnostic uterine pulse, but as in every active crisis there is an increased energy of the whole body, and especially of the heart, there must be in the critical uterine pulse a greater degree of strength than in the diagnostic one, and it must also have the double beat. The nearness of the discharge is determined by the frequency of the latter, but its quantity is measured by the impetuosity of the posterior pulsation. This pulse is rarely to be met without fever, it is present in every uterine hæmorrhage. By its means, if we believe the author, the very hour of delivery may be predicted. By it also we may foretel (mirabile dictu!) whether the child about to be born is a male or a female. If it is a male, the uterine pulse will be found beating more strongly in the right wrist, but if a female in the left!

"The principal physicians of antiquity were acquainted with the pulse, which is the concomitant of a critical sweat, and they have given it the appellation of wavy and soft; but it was afterwards called *inciduous*, by Solano. Both were right; for although we consider the inciduous pulse to be exquisitely critical, yet we have several times found the wavy pulse precede a salutary sweat. The wavy has the same characters which we have assigned to the cutaneous diagnostic; only that it has a greater degree of expansion, and is full and soft, presenting something like the laxity of an aneurysmal sac, and being free from every kind of irritation. The inciduous, on the other hand, is described as an unequal pulse, composed of one, two, three, or four pulsations, rising gradually both in height and vigour above the other pulsations of the diastole."—p. 200.

M. Sacchero supposes that the inciduous pulse is more common in Spain than elsewhere, on account of the physicians there, trusting the patient almost entirely to the efforts of nature, and making use very sparingly of the lancet. We need not here, as the author has done, enumerate the symptoms attendant on this crisis, nor name the diseases which are removed or mitigated by it, as all these must be familiar to our readers.

Like the diagnostic, the prognostic pulses are frequently complicated with each other, a circumstance which is always perplexing to the practitioner, and often renders his best modes of treatment unavailing. One crisis, of course, but probably after many alternations, will have the ascendency; but if, when the disease is far advanced, the critical pulses alternate frequently,

without the appearance of any salutary evacuation, we may consider the case to be a dangerous one.—The prognostic pulses have organic characters in common with the diagnostic, but when a crisis is approaching they are more expanded than the latter; more or less so indeed, in proportion to the nearness of the crisis.—When diseases run a natural course, they end either in resolution or some favourable crisis. But this does not always happen, for, when too much sensibility, a bad constitution or hereditary predispositions, or a chronic affection attacking some organ, are complicated with an acute disease, they not only increase the danger but keep up irritation for a long time in the arterial system, so that the pulse, even when the disease is on the decline and verging to a crisis, remains complicated; or the one felt is the pulse of irritation and coction. But the longer the irritation has lasted the more dangerous will the complication be, though this pulse is little to be feared, if it is only slightly irritated, and at length gives place to the pulse of excretion. This pulse follows a preceding coction, when, in other respects, the periods of an acute disease have regularly run their course; but occult abscesses may be formed, and then a fresh irritation will be excited in the pulse and kept up for some time; the careful examination of such a pulse will much assist our prognosis in the diseases connected with it.

Our author next treats of the fatal termination of disease, in so far as it can be determined by the pulse, which, therefore, we shall consider under the respective heads of inequality, intermission, debility, and collapse.

"That inequality," he says, "which accompanies the epigastric and abdominal pulses, is no way unfavourable; but if it has been a long time attendant on the superior, as the cephalic, guttural, pectoral, and cardiac pulses, it generally predicts death; for it shews either that there is a direct obstruction to the free circulation of the blood, or that the strength of the organs, and particularly of the heart, is very much enfeebled; but in children and women, especially hysterical ones, inequality of the pulse is a matter of much less moment. In those persons who have always had an intermittent pulse, dissection has detected diseases, or organic defects in the heart, the adjacent blood-vessels, or the lungs; but when intermission is connected with an intestinal or renal pulse, so far from being dangerous, it is commonly the forerunner of a salutary crisis. If, however, in diseases it is an attendant on a pectoral or cardiac pulse, it prognosticates great danger: but much of the danger will depend on the nature of the pulse, with which it is in company, and on the age and sex of the patient. Debility of the

pulse is a mark of deficiency of strength in the heart and arteries, which may be occasioned by a superabundance of venous blood, by atony of the nervous system, or by scarcity of blood from whatever cause. In such cases the pulse is small, and seems to proceed from an artery which is empty of blood; but when the pulse is small and hard, as in some severe inflammations, in the cold stage of fevers, &c., there is little or no danger. In the pulse of collapse, at the very time whilst the pulsations seem to retain a certain degree of equality and strength, one of them disappears under the fingers, as if the artery had suddenly been drawn downwards; and the more frequently this vacuity of pulsations is observed in a far advanced and severe disease, the more quickly is death approaching; for instance, if it is observed at every fortieth beat, the patient will die in little more than twenty-four hours; and if at every twentieth, in little more than twelve hours. This kind of pulse is extremely difficult to be known, and can only be learnt by practice. When instead of one, several pulsations disappear, we have the pulse of death or the last agony, which assumes, transitorily, a variety of forms. Excretions, as is sometimes the case, happening at this time accelerate death, which is announced by an unequal, starting, and intermittent pulse, at first escaping with a low quick motion, and then gradually and imperceptibly leaving the wrist."—pp. 214-222.

Our author next inquires how far the cure of diseases may be promoted by a knowledge of the pulse. We do not mean to enter with him at large on the consideration of this subject, as the topics he insists upon must be familiar to practitioners, but we shall give the concluding part of his remarks in his own words:—

"As every organ," he observes, "has its own organic pulse, it is now evident that the pulse is conducive to the proper selection of remedies; the cutaneous pulse, for instance, indicating, in general, diaphoretics; the ascitic, diuretics; the uterine emmenagogues, &c. The evolution of the organic pulse and its change into a critical one will shew whether these remedies have had the desired effect. To produce a favourable change it is necessary that they correspond with the nature of the diathesis and the strength of the patient. We have said that the excitement of the sanguineous system is removed by sedatives, which is shewn especially by the lessening of frequency, strength, and hardness, in the pulse, by the production of a kind of chilly feel, and by the increase and recall of those secretions and excretions, which the super-abundance of the stimulus kept back. A contrary effect is produced by stimulants which raise and strengthen the whole system, and particularly some one organ or bowel, by which means the pulse is elevated, beats more strongly, and obtains at one time or other a critical modification, the action of the muscles is increased, and in a word the integrity of

functions is more or less restored. The first duty, therefore, of the physician will be to detect the seat of the disease by the pulse: the next to settle its diathesis or irritative seat: the third, to know the proper remedies, and to exhibit them at a convenient time and in a fitting dose.— Nothing makes the truth of organic pulses more evident, nothing prepares an easier way by which to acquire a knowledge of them, nothing, in short, exposes more clearly an improper mode of cure, than an attentive examination of the pulse, after the exhibition of remedies; for after an emetic the gastric pulse, after purgatives the intestinal, after diaphoretics, the cutaneous, after narcotics the cephalic, are, for the most part, excited; favourably, indeed, if gradually losing its irritation, the pulse from being compound becomes simple; or, by the changes produced in it, prognosticates some critical evacuation; but if those changes either do not take place, or are not in harmony with the period of the disease, and rather thwart the salutary efforts of nature, there can be no doubt of the physician's error; on which account physicians never can proceed cautiously enough in the treatment of diseases, whether they adminster sedative or stimulant or topical remedies.— We must now mention the precautions which should be observed in the case of pregnant women, and in those whose menses are either flowing or about to flow. The first may occasionally, when necessary, lose a little blood from the hand or arm, but emetics should never be adminstered to them, and purgatives very seldom; indeed medicines of every kind frequently disagree with them: the process going on in the constitution of the others should by no means be disturbed, especially if this spontaneous evacuation appear to be performing the office of a beneficial crisis; or if provident nature, for the same purpose, be endeavouring to produce it at an earlier period than usual; on the contrary, some gentle measures should be taken to assist it. Nearly the same rules should be observed in the case of women who have recently been delivered; and such persons, as they are peculiarly liable to inflammation, should shun stimulants as the worst of evils. But here also the pulse will be our best guide.— If not all, at least very many patients, (whether is it with the assistance of nature or art?) after passing the acute stage of their diseases tend rapidly towards health; and this intermediate state is called *convalescence.* Nor, indeed, must these convalescents be neglected; for they are very ready to relapse; they have exquisite sensibility, and their pulse undergoes a change from even the slightest cause; it is of advantage, therefore, to find out from their pulse, in what organ the remains of the disease is fixed, if digestion is properly performed, &c; for, besides a plan of diet accommodated to the preceding disease, it is commonly necessary to promote digestion by a gentle purgative, or support it by a mild stomachic: at one time exercise is of use in restoring strength; at another, country air, &c.— What we had to say of the pulse as a diagnostic and prog-

nostic symptom of disease, and of the very safe road which it furnishes to a sounder method of cure, we have written with great candour; and if we have not been altogether successful, it is not our will, but rather our ability which is deficient. Many things, indeed, are still wanting to give perfection to this part of pathology; but these may be obtained by some one under more favourable auspices, and every good physician may have an opportunity of improving it. For ourselves, we promise to make public every new fact with regard to this subject, which a longer experience in practice may present to us."—pp. 236, 240.

We have now finished our abstract of our author's performance. It gives a faithful picture of his principles, and has not been executed without labour. We are at some loss how to speak of M. Sacchero's merits: neither his style nor manner indicate a person of lively imagination, yet surely, in his delineation of the respective pulses, there must be much scope for the exercise of fancy. We know that much is often indicated by the pulse, and have found it predicting the near approach of death, which was not otherwise apparent: neither have we any doubt that the diseases of individual organs affect the pulse in a peculiar manner; yet we have some hesitation in believing that the pulse of each organ unerringly strikes the fingers in the methodical manner mentioned by the author. At first sight his doctrine of the pulse appears no less absurd than phrenology; but if, as has been said of the latter, it should be supported by the undeviating testimony of facts, what have we to say against it? But there are two circumstances which weigh rather heavily against the doctrine, its having been invented in the dark ages, and its being a favourite with that ignorant people the Chinese. It may, however, be of use, though it should be but a tub to amuse the whale.

In our abstract we have given merely the naked doctrine; but M. Sacchero has also joined to it the other diagnostic symptoms of disease, and advises us, if possible, never to trust to the pulse alone. He has also in his notes subjoined a great variety of cases corroborative of his doctrine, and has referred frequently to the writings of Morgagni, J. P. Frank, Sydenham, Burserius, and others. He is a Brunonian or a Tommasinian, but withal a believer in the theory of morbific matter and coction. There is a stiffness and obscurity in some parts of his style, and many of his expressions are not classical; but his subject admitted neither of elegance nor ornament.

ART. VI.—*Exposition des Principes de la Nouvelle Doctrine Medicale, avec un Precis des Théses soutenues sur ses differentes parties.* Par J. M. A. GOUPIL, M.D., &c. &c. Paris, 1824. 8vo. pp. 603.

So much has been said on both sides of the question relating to the merits of M. Broussais' peculiar doctrines, that it would now be quite in vain to expect any thing new in the shape of facts or argument. The principal combatants of both parties still retain their original opinions (as in duty bound) with a highly praiseworthy degree of pertinacity, and manifest an amiable and truly philosophic contempt for every thing that their opponents support. Those, to be sure, whose passions have not been excited by too great proximity to the scene of action, or whose happy indifference has left it within their power to judge for themselves, without swearing "in verba magistri," may feel somewhat inclined to suspect, that, with a little truth, there is on each side much error, much prejudice, and much misapprehension of the real meaning and opinions of the opposite one; or that, if the utmost that the innovators claimed were granted to them, it might turn out to consist of a few familiar ideas clothed in artificial and unnatural terms. So far there was not any thing original to be expected in M. Goupil's work; but as it often happens that an ingenious man is enabled to dress up well-known facts and arguments in a new and attractive form, we were willing to flatter ourselves that such might be the case in the present instance: but, alas! we were destined to be disappointed; nothing can be imagined farther from originality; it is, in fact, little more than a jumble of unconnected opinions extracted from the theses of the young French graduates who have adopted the tenets of M. Broussais, and who have availed themselves of the opportunity of propagating them, presented by (what we may be allowed to call) the Saturnalia of medical education—we mean the period of preparing and publishing those profound productions called inaugural essays.

The ground-work and very texture of the whole book before us is formed of such materials; and M. Goupil has brought nothing of his own to the task, except, indeed, it be the insufferable dullness with which he has contrived to overspread the whole.

"No book is so bad but that some good may be extracted from it;" so says the proverb, and we agree with it, or we

should otherwise most certainly have allowed M. Goupil to slumber in peace.

One of the doctrines most strenuously advocated by the school of which M. Broussais is the founder, consists in the assertion, that all morbid changes of structure are to be considered as the result of previously existing irritation or inflammation, two states or affections between which, in the manner they are described by M. Broussais, it is impossible to distinguish any other difference than that of *major* and *minor*. Whether we consider scrofula or cancer, tubercles, fibrous or fungoid tumours, melanosis, or any other imaginable organic change, the same explanation is given of the production of all—"phlegmasie," nothing but "phlegmasie,"—or sub-inflammation, according to one disciple of the school, M. Palais, whose thesis on pulmonary tubercles is quoted by M. Goupil. How one cause should be capable of producing such infinitely diversified effects, we are left to explain in the best manner we can. Some of the difference of opinion between this school and those who adhere to the more generally received opinions, may be perhaps explained by supposing, that, in this instance, the former makes an incorrect application of the term "phlegmasie." Those who deny that inflammation should be considered as a necessary precursor of cancer, tubercles, &c., will, in general, find themselves obliged to explain the occurrence of those changes of structure, by having recourse to the supposition of some peculiar local irritation, or increase or perversion of vascular action, states or conditions which have been often hypothetically assumed, but never positively demonstrated. This, in fact, is one of the most obscure parts of pathology, and needs much additional investigation and attention before any thing like certainty can be attained. But it is possible that by the terms "phlegmasie," "sub-inflammation," M. Broussais and his followers may intend to imply what others understand by irritation or perverted vascular action; and, if so, the difference of opinion between them is, of course, much less considerable than would at first sight appear. But, even in this case, M. Broussais cannot escape the reproach of having perverted the language commonly employed, and of having made use of the appellation of one well-known condition or process to express another totally different from it.

The treatment of such diseases by his partisans would seem, however, to prove, that by "phlegmasie," they really mean genuine inflammation, and not, as others do, some obscure and imperfectly known condition or process. We shall take cancer as an instance. M. Broussais' school boldly disclaims the idea

that it should be considered as an incurable disease; according to the doctrines thence promulgated, cancer depends upon inflammation, and consequently may be cured by the suitable application of antiphlogistic remedies. To prove this point, (if well founded, certainly of no small importance,) M. Goupil has recourse to the thesis of M. Marechal—"Observations Cliniques, suives de quelques Reflexions generales sur les Affections Canceroses. Montpellier, 1821." This thesis contains several cases of the cure of cancerous diseases by antiphlogistic treatment; of which, two were communicated to the author by Professor Lallemand, of Montpellier, a follower of the new school, and well known by his Letters on the Diseases of the Brain. Some of these cases we shall transcribe in an abridged form, and add a few observations naturally suggested by their consideration.

Case 1.—(By Professor Lallemand.) "Adelaide Menestrier, sempstress, aged 20, in July, 1816, perceived the formation of a tumour in the left iliac region, attended with pain. Leeches and emollients were applied at intervals during four months, but without relief. The abdomen enlarged considerably; the patient passed purulent matter by the anus: she then got easier, and the size of the abdomen diminished. In December she went into the Hospital St. Antoine, and staid there five weeks, but without improving. The symptoms increasing, she entered the Hotel-Dieu, January 16th, 1817. She was in the following state: severe, lancinating pains in the abdomen, particularly in the left iliac region, where pressure was insupportable; pain on motion; deformity of the neck of the uterus, and a tumour as large as a child's head, occupying the space between the anterior, superior spine of the ilium, and linea alba, and filling the whole of the iliac fossa. The tumour was evidently formed in the uterus or its appendages, as the action of one hand applied to it could be distinguished by the finger of the other in contact with the cervix. The lancinating pains and the fœtid discharge from the vagina indicated the ulceration of a carcinomatous tumour. The weakness was extreme: the patient sleepless and hectic. Prescription: diluting drinks; emollient injections; warm bath; twelve leeches to the left iliac region, and narcotic cataplasms.

"On the 17th, the patient in the same state: prescription repeated.—18th. Extension of pain to the hypogastric region: twenty-four leeches to the left iliac and hypogastric regions.—19th. Less pain, but pulse febrile, and evening exacerbation more severe: thirty leeches to the same parts.—20th. Fever continues; other symptoms less severe: twenty-four leeches: other remedies as before.—22d. Eight leeches, anodyne potion, &c.—23d. The same measures continued, except the leeches, and with the addition of opium and calomel until the 30th.

"January 30th. Pain and fever more intense: fifteen leeches to the hypogastrium.—February 3d. Pain: frequent pulse; evident diminution of the size of the tumour: fifteen leeches.—4th, Six leeches: a warm bath.—6th, Severe pain: belly painful on the least pressure: twelve leeches: bath.—8th. Considerable improvement, continuing for some days, with slight interruptions.—19th, Increase of the size of the tumour: tumefaction of the belly: ten leeches to the abdomen; five to the vulva.—20th, Improvement: prescription repeated.—27th, No remarkable change: twelve leeches.—28th, Ten leeches.—29th, A blister to the inner part of the left thigh.—March 4th, The tumour appears to be reduced to the size of an egg: occasionally pretty severe pains are felt in it: eight leeches.—6th, Marked diminution of the size of the tumour: absence of pain: narcotic cataplasms and injections; opium internally: increased diet.—8th, Exacerbation: fifteen leeches.—10th, Ten leeches to the vulva; a slight sanguineous discharge by the vagina.—11th, Improvement: return of strength: cessation of pain: the tumour to be felt in the left iliac fossa, flattened, and as large as a small hen's egg.—14th, the patient left the Hotel-Dieu.

"Her health continued to improve.—April 17th, The menses re-appeared, and the patient amended still more; but about the end of the same month, she relapsed: the belly became painful: symptoms of gastro-enteritis and lancinating pains announced the return of the tumour. The application of twenty-five leeches, baths, local emollients, and a blister, quickly checked these accidents: after some aromatic vapour baths, the menses again appeared. Four months afterwards she was perfectly recovered. On the left side of the pelvis, a tumour could be felt as large as a nut, but the neck of the uterus had regained its form. M. Lallemand again saw her, eighteen months after leaving the hospital: she had two or three times experienced attacks of severe pain in the left side of the abdomen, which she had relieved by the application of leeches, without consulting any one.

Case 2.—(By Professor Lallemand.) "Michelle Bahaud, aged 25, experienced lancinating pains in the left breast, and discovered in it a little tumour, at first moveable under the finger, but at the end of six months as large as a nut, and very painful upon the slightest touch. After a year spent in unavailing attempts to effect its resolution, the patient was informed that she had a scirrhous tumour in the breast, which required a speedy extirpation. She refused to submit to the operation: the disease made progress; symptoms of phthisis displayed themselves, and the patient entered the Hotel-Dieu, December 14th, 1816, in the following state: a hard, bossy, irregular, sub-cutaneous, tumour, of the size of a large goose's egg, occupied the middle of the outer side of the left breast: the patient experienced constant dull pain there, and occasionally, intolerable lancinating pains, extending over the whole side of the chest and shoulder. For five or six months she had but

little sleep: she was extremely emaciated; her skin was dry, always hot, and covered with furfuraceous scales: every evening she had a febrile exacerbation, lasting a great part of the night, and terminating by copious, viscous, sweats: she had several attacks of hemoptysis; coughed continually, and expectorated a great quantity of thick, puriform matter. The symptoms not leaving any hope, nothing was prescribed, for a fortnight, but ptisans, &c. The pain in the breast, and the pulmonary symptoms, becoming more severe, and the patient earnestly requesting relief, M. Lallemand ordered the application of eight leeches, a bath, and emollient cataplasms. The pain, the fever, and the cough, having sensibly diminished, the application of leeches was repeated in four days. At the end of ten days, the tumour being less hard, the cough, spitting, and fever having diminished, M. Lallemand, encouraged by this success, continued the same treatment, and ordered a low diet. The tumour gradually became soft and diminished in size: in two months and a half it was not larger than a small hazel nut: the pulmonary symptoms had disappeared, and the patient had regained her colour, with much of her flesh. In that space of time one hundred and twenty leeches had been applied, and the patient had lived on broth, milk, rice, &c. She was unwilling to remain longer in the hospital, but continued the same treatment after leaving it. In another month and a half the tumour had disappeared, and Michelle had regained perfect health."

M. Goupil remarks on this case, that it proves the possibility of curing cancer, even after the appearance of lancinating pains; or else, as M. Lallemand observes, that there are some diseases so closely simulating cancer, that it is impossible to distinguish them from it.

Case 3.—"A lady, aged 52, whose health had been much disturbed at the period of the cessation of the menses, felt, in August, 1819, occasional pains in the left breast, which recurred, periodically, every month. At the end of six months an oval tumour presented itself, as large as a hazel nut, and moveable under the skin. Its size gradually increased, and in three months more it was as large as a goose's egg; it was then hard, knotty, uneven, and lancinating pains were felt in it at intervals. The skin covering it was tense, shining, and variegated with small vessels. Friction with a narcotic tincture rendered the pains more intense and more constant. The skin thinned towards the middle of the tumour; a fissure presented itself, discharging a purulo-sanguinolent matter, of an offensive smell: the patient got no sleep; digestion failed, and rapid emaciation took place. The removal of the breast was proposed, but the patient refused to consent. By the advice of M. Olmade, of Montpellier, emollient and narcotic cataplasms were applied to the breast, and changed every four hours: and at the same time leeches were applied every three or four days, the bleeding from their bite being encouraged for several hours. The

patient finding relief from this treatment, persevered in it: the pains diminished insensibly; sleep and appetite returned; the tumour diminished; the broken surface healed; and in the space of two months, the patient was entirely relieved from her complaint. In that time about one hundred leeches had been applied.

Case 4.—"Antoine Durand, at the age of 45, discovered a little pimple in the middle of the lower lip, which burst on the sixth day, and gave rise to a little ulceration, that healed after some applications of nitric acid, but opened again in six weeks, and remained stationary for four years: scabs formed on its surface, fell, or were torn off, and were soon replaced by new ones. In 1819 a surgeon cauterized the lip with nitrate of silver, which formed an eschar, the separation of which exposed an ulcerated surface of considerable extent. The whole of the lip then swelled and became painful. After an application of corrosive sublimate, all the symptoms increased: the pains became more acute and more frequent; the edges of the ulcer were everted, and such a loss of substance from the middle of the lip ensued, as to prevent the mouth from being closed. May 8th, Durand entered the Hospital St. Eloi. M. Lallemand recognized the cancerous character of the ulceration by the hardness and eversion of its edges, and by the lancinating pains. He ordered the application of eight leeches about the lip, to be followed by an emollient cataplasm. The induration and pain diminished. On the 12th, the same number of leeches was applied, and the amelioration was still more marked.—13th, Eight leeches again, at the patient's own request.—22d, The pains had almost ceased, and some progress towards cicatrization was perceptible.—June 13th, The pains had altogether disappeared, and there remained only a little flap of the edges of the ulcer, as large as a lentil, and which was removed by the knife. In a few days afterwards, the patient left the hospital completely recovered."

M. Goupil has given several additional cases, derived from the same source, but these we do not think it necessary to transcribe, partly because of their extent, and partly because they are not so conclusive as those we have laid before our readers.

And now, probably, it will be asked what is our motive in inserting the cases in question, or what is the nature of the conclusion that we wish to be drawn from them. Is it intended to be proved that cancerous diseases are really curable by the treatment here recommended? Such certainly is the object of the French writers, and if we looked merely to its consequences, in these particular cases, we might be led to allow that there was reason to express a suspicion of the possibility of such an occurrence, if not positively to determine it in the affirmative. But when we consider the uniform accordance of the best autho-

rities in the expression of an opposite opinion, and the probability that these anomalies may be explained by the acknowledged difficulty of drawing a line of distinction between diseases which really are, and those which appear to be cancerous, we are obliged to confess that they are not sufficient to prove the curability of cancer. At the same time, that must be allowed to be a very doubtful and very objectionable mode of reasoning, which draws conclusions as to the nature of a disease from the mode of its termination, in opposition to the inferences inevitably suggested by the character of its symptoms; a mode of reasoning, in fact, which can only be excused in the present instance because of the general accordance of its results with extensive experience.

But leaving these questions precisely as we found them, those who are most fully convinced of the incurability of cancer, are, by such cases as the above, inevitably placed in a dilemma from which they cannot possibly extricate themselves. Granting that they do not prove the curability of cancer, it cannot be denied that they clearly shew that there are forms of disease, not cancer, and yet so closely resembling it in every circumstance, as not to be distinguishable from it, except by the mode of termination. And here we arrive at the object which we have throughout had in view, viz. to attempt to show that by adhering to the same principles which regulate our conduct under other circumstances, we might cure, not cancer indeed, but many diseases which cannot be discriminated from it. We are perfectly aware that neither the class of cases of which the above are specimens, nor the mode of treatment there employed, have any claims to be considered as novelties. But the question is not whether they are new, but whether they have attracted sufficient attention, and whether the conclusions deducible from them are familiar to the minds of those engaged in practice. We may be told, that surgical science affords means of distinguishing cancer from the diseases resembling it; but we beg leave, in the first place, to express our doubts of this perfection of diagnosis; in the next, supposing it really to exist, it must be allowed to be very partially diffused through the profession; and it will easily be supposed, that a surgeon deficient in this capability of minute discrimination, is much more likely to confound other diseases with cancer, than to mistake cancer for any thing else. The consequences are obvious: the persuasion of the incurability of cancer must form an obstacle to any attempt at cure; the disease will of course make progress, and as there is every reason to believe that true cancer seldom commences in healthy parts, but rather in those, the structure of which has

been already changed, it may happen that the consequences of the mode of treatment, or rather the want of treatment, shall apparently confirm the accuracy of the diagnosis, and in that manner, though not incorrectly, tend to establish more firmly the ideas already entertained on the subject.

Much may be said in favour of the plan, and in prudent hands it is liable to few objections. Even in true cancer, the best surgeons and writers on female diseases consider it as the most effectual way of retarding the progress of the disease. Independent of it, there are two methods of treating cancer, (and we have, throughout, cancer in the mammæ particularly in view.) In the first, which is infinitely the most prudent, the main object is to defend the part, and keep it in a state of quietness, paying, at the same time, the utmost attention to improve and support the state of general health. In the second, which, however, at present, has comparatively few advocates, the wretch, already labouring under a mortal disease, is poisoned, or his health ruined by the use of various virulent and noxious remedies, drawn from the mineral and vegetable kingdoms. What may be called the antiphlogistic plan, is beyond comparison, preferable to the last: it is not altogether incompatible with the first, and if found, after a fair and cautious trial, to be unsuccessful, still admits of having recourse to it. One rule always to be held in sight is, that any mode of treatment which injures the general health should be abandoned, unless its effects upon the local disease are so decided as to justify us in incurring the risk of disturbing the constitution.

What we have said, of course, has no relation to the removal of cancerous diseases by the knife: this is performed either as a question of prudence and choice upon the part of the patient, or as a matter of necessity, and a means of prolonging life. In either case, the possible advantages of any other mode of treatment must be supposed to have already had a fair share of consideration.

ART. VII. *Nouvelles Recherches sur la Laryngo-Tracheite, connue sous le Nom de Croup.* Par P. BLAUD, D.M. &c. &c. Paris, 1823. 8vo. pp. 544.

M. Blaud appears to possess greater claims to originality than the majority of medical writers, who come forward with professions of novelty. His researches, if they should be found

to stand the test of experience and examination, will probably afford a satisfactory explanation of the variety of statements which have been made with respect to the mortality of croup, and the effects of different modes of treatment upon it. He states his opportunities of observing the disease to have been considerable, from the situation of his place of residence, Beaucaire, on the banks of a great river, at a short distance from the sea, and possessing an atmospheric constitution variable in the extreme: as an instance of the latter fact, he states, that in spring and summer, the mornings, evenings, and particularly the nights, are moist, with a temperature from 8° to 15° (Reaumur), whilst in the middle of the day it is hot and dry, with the thermometer from 20° to 28° (Reaumur.)

M. Blaud commences by objecting to the term Croup, in common use, and proposes to employ in its stead, Laryngo-Tracheitis, as more correctly designating the nature of the disease. It would have been more philosophical to have first shewn his reasons for adopting the idea of the nature of the disease which this name conveys; and it may be questioned whether the term he rejects be not preferable, precisely because it does not involve any theoretical views. M. Blaud's principal object is to shew the necessity of dividing croup into several species; and having established to his satisfaction that croup is an inflammation of the larynx and trachea, he proceeds to shew the propriety of the proposed division by proofs of four different kinds: 1st, By proofs from reasoning; 2d, By proofs from analogy; 3d, By proofs from experiment; 4th, By proofs from observation. For reasons which our readers will doubtless not be at a loss to understand, we shall confine our notices almost exclusively to the latter.

Those who have paid any attention to the history of croup will scarcely require to be told that an almost infinite diversity prevails in the opinions of writers with relation to almost every circumstance connected with the disease: in this respect two points deserve particular attention, viz. the varying statements of the mortality and curability of croup, and the nature of the remedies employed in its treatment. According to some, it is almost invariably fatal, and even under the most favourable circumstances with difficulty yields to the most active treatment: if we are to believe others, it is in general a comparatively trifling affection, and easily to be overcome by a few simple measures. Hitherto it has not been possible to give any adequate explanation of these apparent paradoxes. If, however, the opinions advanced by M. Blaud be correct, both the statements are, to a certain degree, correct; and the source of diffi-

culty and error consists in adopting either of them too implicitly, and to the exclusion of the other.

He states, as the result of his experience, that croup presents itself in three different varieties, or rather, as we should say, in three different degrees. His first variety he describes as, "laryngo-tracheitis, extremely violent, almost always fatal, particularly if it be not attacked at the moment of its invasion, and characterized by the uniform production of a false membrane." —p. 41.

"This species," says the author, "recognized by all practitioners, has served as the type for all the general descriptions of croup: almost always mortal from the spasm of the muscles of the larynx, with which it is complicated; it sometimes terminates in a few hours, and is at others prolonged to the seventh, eighth, or ninth day, or even longer."—p. 43.

The formation of a false membrane being supposed to be a necessary consequence of the existence of croup, writers on the disease were obliged to have recourse to various ways of accounting for the variety of conditions in which the secretion from the mucous membrane of the trachea presented itself.

"This variety," says M. Blaud, "was referred to the variable duration of the disease, and to the difference of the periods at which the examination was made."—"It was supposed that if croup proved fatal in its first stages, no false membrane would be found, a sufficient length of time not having elapsed for its formation; if an examination were made when the disease was more advanced, the false membrane would then present itself; and if the parts were inspected at a still later period, the new production would have disappeared, and would be replaced by a collection of viscous, mucous matter, consequent on some discharge it had undergone." —p. 45.

This account of the attempts to explain the anomalous appearances of the state of the parts as they occasionally present themselves after croup, though perhaps not altogether correct, is certainly not much exaggerated. Having given this statement of the ideas commonly entertained, M. Blaud next sets about to prove—1st, That in the most intense and fatal cases of croup the pseudo-membranous concretion is always formed; 2d, That this concretion, when once formed, does not undergo any change, in what has been called the third period of the affection.

His first proposition he establishes by the relation of cases, in which the false membrane was found completely formed, although death took place at an unusually early period. In Case 2, the disease lasted but sixteen hours; in Case 3, twenty hours; in Case 4, six hours; in Case 5, eight hours; and yet in all of

them the pseudo-membrane was most completely formed: these are cases derived from M. Blaud's own experience, but he has also quoted a considerable number of others from various authors, all tending to prove the same fact. It must be allowed, that some of them seem to prove rather too much; for there is some degree of difficulty in conceiving the formation of a perfect and consistent membranous production, in such a very limited period of time as six or eight hours. Probably the supposition adopted by M. Blaud, that such a production is a necessary concomitant of the more severe forms of croup, may have led him into an error in this particular, and that in such cases it would be more rational to suppose that the disease had been of longer duration, although the first symptoms announcing its existence had either been actually wanting, or imperfectly observed.

Whether this however be really the case or not, there cannot be any doubt that the author is perfectly correct in rejecting the division of the disease, proposed by some writers, into periods of invasion, crudity, inflammation, coction, and suppuration, and founded on the supposed alterations in the state of the membranous secretion, from the mucous membrane lining the air passages. Dr. Blaud has been at the pains of still farther refuting the idea, of the possibility of the occurrence of any such changes in the secretion from the trachea, independent of vital actions, by showing that the ordinary physical agents, to which it is exposed, are totally incapable of producing any such effect.— This labour might seem superfluous to those who are not aware of the confidence with which this doctrine has been supported, or not impressed with the importance of substituting the vital, for the chemical and mechanical theories of diseases so often to be met with, even at the present day.

His second proposition, viz. that the false membrane once formed, remains unchanged during the whole course of the disease, is demonstrated in the same manner, by a collection of cases derived from various sources. In Case 1, it was perfect, although the disease lasted eight days: in Case 2, it was found at the end of ten days: in Case 3, it was seen on the ninth day, &c.

His second species of laryngo-tracheitis, or croup, M. Blaud distinguishes by its being less serious than the first, often curable, never producing a false membrane, and by being attended from the beginning, or soon afterwards, through its whole course, with the secretion of what he calls a muco-albuminous, puriform fluid.—This distinction rests upon the relationn of cases, which of course, although proofs of the most convincig

kind, do not admit of being transferred to the pages of our Journal. Some of these cases were fatal; in others, recovery took place; but in all, the leading character of the disease consisted in the expectoration of a muco-albuminous, or puriform fluid. In the fatal cases, when dissection was performed, the trachea, larynx, and bronchiæ, to their extremities, were covered with an abundance of thick puriform matter, in some of these the disease had lasted so short a time, as to render the supposition of the solution of a false membrane highly improbable, supposing that the possibility of such an occurrence was not sufficiently disproved by arguments derived from other sources.

We come now to the third species of croup, as described by M. Blaud: this he calls slight and benign laryngo-tracheitis, very rarely fatal, producing neither a false membrane, nor a muco-albuminous, puriform fluid, but merely an augmentation of the ordinary mucous secretion from the trachea, &c.—The existence of this is proved by the same arguments as that of the former species, and like them, these arguments from their nature do not admit of transcription. It is to a want of proper discrimination between these species, or rather varieties of croup, that M. Blaud attributes the want of exactness in the diagnosis of that disease, together with the uncertainty of the prognosis, and of the mode of treatment.

"It must not however be supposed," says M. Blaud, "that the varieties of croup, thus distinguished, always present themselves in a simple and isolated form; on the contrary, they are often reciprocally combined, either primitively, or by some consecutive changes of the form in which the disease originally presented itself, thus forming cases of laryngo-tracheitis, which I shall call compound."—p. 180.

He insists on the importance of paying particular attention to this circumstance, because of its great influence on the diagnosis, on the treatment, and above all, on the prognosis. According to the method before employed, M. Blaud brings forward a great number of cases proving the existence of the complication of his three varieties of croup, not only from his own practice, but from the writings of the principal authors upon the disease. Not contented, however, with having rendered the existence of these three varieties of croup, and of their mutual complications, if not certain, at least highly probable, and deserving of examination, and future observation in connection with this idea, M. Blaud has thought it necessary to go a step farther, and to invent denominations for them derived from the Greek. As the nature of the secretion from the mucous membrane of the air passages forms the

basis of his distinctions, so he thinks that it should guide us in providing them with appellations. The first degree or variety of the disease is that in which there is merely an increase of the natural mucus of the parts; hence we have the name—"laryngo-tracheite, myxagene,"—from μυξα, mucus.—For the second variety, characterized by a muco-puriform secretion we have—"laryngo-tracheite, pyogene from πυον, pus. And the third, in which only a false membrane is formed, is to be called—"laryngo-tracheite, meningogene from μηνιγξ, membrana.

But even this is not enough to satisfy M. Blaud, his infection with the prevailing mania for nomenclature has prompted him to give names to the various complications of the three varieties with one another, so that we have the truly terrific terms of "Laryngo-Tracheite, Myxa-phyogene,"—Laryngo-Tracheite, Myxa-meningogene"—"Laryngo-Tracheite,Pyo-meningogene;" "and Laryngo-Tracheite, Myxa Pyo-meningogene." — Such terms as these forcibly reminded us of the Baron in Voltaire's Romance, "Candide," with a name that nobody could pronounce. It is difficult to be serious about such a subject; but it is truly surprising, that any one in his senses should imagine that there was any utility in the invention of such terms, or that they were at all likely to further the progress of science.

We gladly pass on to something more rational. According to M. Blaud, the predisposing causes of croup are—1. Infancy; 2. Sex; males being much more frequently affected; 3. A peculiar state of the lining membrane of the trachea, &c. either original or acquired; 4. Inflammation in the neighbourhood of that membrane; 5. Acute cries prolonged for a greater or less length of time; 6. A stimulating diet, &c. After treating at some length on these and similar topics, he notices the principal sympathetic affections with which croup is occasionally complicated. Of these it must be confessed that there is nothing more important than the spasmodic action of the constrictor muscles of the larynx. M. Blaud justly remarks, that impediment to respiration is often evident from the very commencement of the disease, and at a period when it is impossible to suppose that there is any new production capable of interrupting the free ingress of air into the lungs.

"In many cases too," says he, "this impediment is not constant; often ceasing suddenly and re-appearing again, and in many cases assuming a periodical character."—p. 311.

"Dissection too, often shews that the trachea is not obstructed by the products of the disease, and frequently nothing is to be found but a thin layer of mucous, puriform, or membranous matter, insufficient to interrupt the passage of air."—p. 312.

He considers it however of great importance, that the spasm of the muscles of the larynx should be distinguished from the disease itself.—"It constitutes no essential part of croup; it is merely a sympathetic complication."—He gives cases tending to prove, 1. That it is not a constant phenomenon of the disease; 2. That its degree is not always proportioned to the intensity of the inflammation; 3. That it sometimes does not shew itself until long after the establishment of the disease; 4. That it is often periodical, diminishing or increasing, without any corresponding change in the inflammation; 5. That it may continue, or having ceased, may return after the disappearance of the inflammation; 6. That the organs which it affects are more or less remote from the seat of the disease; and, 7. That it occurs in many other affections besides croup.

From a consideration of the attachments and action of the muscles of the larynx, M. Blaud deduces an explanation of the various affections of respiration witnessed in croup. Dyspnœa, for instance, is the consequence of the contraction of the glottis, by the posterior crico-arytenoid muscles, and more particularly the transverse arytenoid muscle. In immediate dependence upon this constriction, which of course renders respiration imperfect, are a variety of symptoms; such as the livid colour of the lips, the tumefaction and injection of the face, the projection of the eyes, headache, somnolency, coma, convulsions, a peculiar anxiety, frequent respiration, the tossing of the head backwards, and the various motions performed by the patient, in order to facilitate the access of air to the lungs. In giving the rationale of these phenomena, M. Blaud states, that the convulsions arise from the irritation of the brain by the blood with which it is loaded: probably, however, more is here to be attributed to the venous, carbonated quality of the blood than to its excessive quantity. The frequency of respiration serves, as far as is possible, to supply the deficiency of its extent; and in this case inspiration is rapid, in order quickly to satisfy the necessity for breathing whilst expiration is slow, in order to prolong the action of the inspired air on the venous blood.

The hissing respiration observed in croup depends upon a similar spasmodic action of the constrictor muscles of the larynx, carried however to such an extent as to bring the edges of the glottis into almost perfect contact in the greater part of their length. This hissing is totally distinct from the rattling of respiration, which depends upon the accumulation of moveable fluids in the air passages. They may, however, exist in combination, but are easily distinguishable by the sound peculiar to

each, and by the continuance of hissing after expectoration, which always puts a stop to the rattling.

The hissing is sometimes dull and obscure, at others sonorous, and sensible at a considerable distance; in the former case, the edges of the glottis are but slightly, in the latter very closely approximated.

The sound of voice peculiar to croup, and from which it is supposed to have derived that name, depends, according to M. Blaud, on the simultaneous action of two distinct causes—1. The spasm of the constrictor muscles of the larynx; and, 2. The peculiar alteration which the inflammation produces in the mucous membrane covering the vocal ligaments. Hence he supposes that the degree in which the voice is affected may afford some assistance in determining the probable extent of the inflammation towards the larynx, in which the vocal ligaments are placed. As some of the conclusions of our author are of considerable importance in relation to the diagnosis and prognosis of the disease, we shall subjoin them.

"1. If the voice is but little affected in its tone, or only at intervals, it is a proof that the inflammation is situated at some distance from the larynx. 2. If this slight or fugacious alteration of the voice is combined with but little dyspnœa, the inflammation is slight. 3. This inflammation, on the contrary, is very violent, if the dyspnœa and hissing respiration are very strongly marked. 4. If, in addition to these symptoms, there be extreme hoarseness or aphonia, they indicate intense inflammation of the larynx, and probably of all the air-passages. 5. The change in the tone of voice always proves the existence of spasm of the constrictor muscles of the glottis; the more acute the tone, the more intense is the spasm; and, in general, the more violent is the inflammation. 6. Although the laryngo-tracheal inflammation exists, the change in the tone of voice may cease, or may never appear, if the spasm be interrupted, or if it has not developed itself.—pp. 344, 345.

In accounting for the mode in which this spasmodic constriction of the glottis takes place, M. Blaud supposes that the irritation of the mucous membrane lining the organ produces a sensation similar to that arising from the presence of a foreign body; and that this deceptive sensation is transmitted through the nerves to the brain, which, in its turn, re-acts upon the muscles. In the same way we observe vomiting in gastritis, although the stomach is empty, tenesmus in dysentery, occlusion of the eyelids in ophthalmia, &c. This state of irritation explains why the spasm is greatest during inspiration, viz. in order to prevent the additional irritation arising from the access of atmospheric air.

The seventh chapter contains the history and diagnostic marks of the three simple varieties of croup, as described by M. Blaud.

According to him, croup, with a secretion of a mucous fluid, commences with a feeling of dull pain or uneasiness in the air-passages. At the same time, the voice becomes hoarse, and there is a remarkable mucous rattling, particularly in expiration. This rattling is interrupted by a more or less violent cough, producing expectoration of a viscid purely mucous fluid. Sometimes the fits of coughing are at a considerable interval; more commonly they are very frequent, and only terminated by perfect expectoration. This variety depends on the degree of inflammation, and the amount of the secretion of mucus. The symptoms of spasm of the glottis are generally but slight in this variety, being either scarcely perceptible, or only at the moment of a deep inspiration. When the spasm here is considerable, M. Blaud thinks it attributable to idiosyncrasy, rather than the amount of the inflammation. The termination of this variety is almost always favourable; and when it is otherwise, it generally depends on some complication, or on an unusual spasm of the glottis, or on its conversion into one of the other two.

The second variety of croup, that which is accompanied by the formation of an albuminous puriform fluid, generally makes its appearance with more pain than the former, and frequently with a degree of swelling in the region of the larynx and trachea. The degree of affection of the voice depends upon the condition of the larynx; and, together with the secretion which forms the character of the variety, a rattling is heard, as in the former one. M. Blaud thinks, however, that, to a practised ear, there is a perceptible difference in the sound, arising from the greater tenacity of the fluid. The fits of coughing are less frequent than in the first variety, and are followed by more or less perfect expectoration of the puriform secretion, which, for a time, removes the rattling. The spasm of the glottis is constant in this form; it is more violent than in the former one, and generally appears within a few hours after the invasion of the disease. Its duration is generally longer, and its termination more frequently fatal, than in the first variety: the favourable symptoms are, free respiration, the change of the secretion to a mucous character, with frequent cough, and subsidence of the spasm of the glottis. Its peculiar characters are, 1. The greater intensity of the symptoms. 2. The nature of the rattling in the trachea. 3. The expectoration of a puriform fluid, or its accumulation in the trachea, in case of death. Lastly, The greater frequency of a fatal termination.

The last, or membranous, variety of croup commences more or less suddenly, and with more or less local pain; the patient applies his hand to the trachea, and in many instances there is visible swelling in its vicinity; the voice is affected, or not, as the inflammation does, or does not, extend to the larynx. This variety is distinguished from the former by the total absence of rattling, unless it be at the very commencement of the disease, before the formation of the membrane. In some rare cases, there is a peculiar sound, like the motion of a valve, arising from the partial detachment of the false membrane, and its alternate elevation and depression. The cough is much less frequent than in the former variety; it is dry, and unattended by expectoration, unless in the case of an accidental separation of part of the false membrane—a circumstance, of course, easily to be recognized. The cough, as the disease proceeds, becomes less frequent; 1. Because the membrane of the trachea loses its sensibility to the presence of a foreign body. 2. Because it is defended by the new production from the air. 3. Because the susceptibility and consequent re-action of the brain are destroyed by the impeded state of respiration (p. 413). In general the spasm of the muscles of the glottis is present from the very commencement of the disease; occasionally, however, it does not shew itself until some days have elapsed. The duration of this variety presents great differences: it sometimes terminates fatally in a very few hours; at others, it lasts as long as ten, twelve, or eighteen days. In general, the longer the duration, the greater hope is there of a favourable termination. This latter is indicated when the cough increases in frequency, when rattling presents itself, and a more or less copious expectoration of pieces of the false membrane, first in company with a puriform, and subsequently with a mucous fluid. This variety differs from the preceding ones: 1. By the greater severity of the symptoms. 2. By the absence of rattling. 3. By a membraniform expectoration. 4. By the greater intensity of the spasm of the glottis. 5. By the greater severity of the sympathetic phenomena, the cough only excepted. 6. By its termination, almost always fatal. 7. By the pseudo-membranous production found in the trachea after death.

We do not think it necessary to follow M. Blaud through the description he has given of the compound varieties of croup, particularly as he has himself admitted that they are obscure, and with difficulty distinguishable.

In considering the treatment, he first applies himself to shew, that certain specific remedies are either useless or improper. For this purpose, he quotes cases tending to prove, 1. That the

cases of croup which terminated favourably, under such treatment, were slight and benignant, the cure being spontaneous, or assisted by more suitable measures; or, 2. That the same remarks are applicable when the disease was more severe; or, 3. That, in serious cases, the greater number terminate fatally, in spite of such treatment.

In this manner he disposes of calomel, the polygala seneka, carbonate of ammonia, and sulphuret of potash. Emetics, he admits, may, in certain cases, afford powerful assistance in the treatment of croup, but should never be considered as sufficient for the purpose of cure. In the same manner he proscribes tracheotomy, because it is not calculated to remove the inflammation, and because it has a tendency to aggravate the symptoms. It is unnecessary to say that his opinions on these subjects are liable to many objections, and that he does not appear to have acquired a correct idea of the views with which some, at least, of these curative measures have been recommended.

The mode of treatment employed by M. Blaud himself is almost exclusively antiphlogistic, but with considerable varieties, according to the particular form of the disease which may happen to be present. In his laryngo-tracheite myxagene, he contents himself with ordering pectoral infusions, a gentle emetic, if the air-passages be much loaded, and the application of a blister. In the laryngo-tracheite pyogene, the same treatment, with the addition of general or local bleeding, a free use of external irritants, and a low diet. In his laryngo-tracheite meningogene, local bleeding, even to syncope, to be repeated if necessary; many and powerful external irritants; purgatives and injections; pectoral infusions, &c.; inspiration of vapours; abstinence; and emetics, if the concretion is moveable, or if a part of it has been already expectorated. As to the accompanying spasm, looking to the causes of its production, he feels convinced, that, when present, it can be removed by such remedies only as interrupt the inflammation. If it should continue after the subsidence of this inflammation, he admits that it may be proper to combat it by antispasmodics, such as lactuca virosa, zinc, castor, musk, stramonium, &c.

The extent of M. Blaud's treatise has necessarily limited our notices to some of the principal points; there are, however, many others of considerable interest, among which we may mention his remarks on bronchitis, and some other complications of croup, together with some ingenious researches on the mode of occurrence of the principal symptoms of the disease, and the varieties they present. In fact, the work is evidently the production of a man of talent and industry, and

will well repay the pains of perusal. Whatever reason, too, there may be to doubt about some of the minor parts, we think that the main idea pervading the whole, viz. the existence of very different forms of croup, is extremely rational, and well calculated to clear away a great deal of the obscurity in which the commonly received ideas of the disease have certainly involved it.

QUARTERLY HISTORY

OF

IMPROVEMENTS AND DISCOVERIES,

BOTH AT HOME AND ABROAD,

IN

Anatomy,	Surgery,	Materia Medica,
Physiology,	Practice of Physic,	Pharmacy,
Pathology,	Midwifery,	Chemistry,
Morbid Dissections,	Forensic Medicine,	Botany, &c.

Forming a useful Library of Practical reference.

I. ANATOMY.

M. Amusat's *Anatomy of the Gall-bladder.*—Our readers already know M. Amusat, from his new contrivance in the treatment of vesicular calculi, mentioned in a former number of this Journal. At a late sitting of the Académie Royale de Médecine of Paris, our author exhibited several drawings and anatomical preparations of the biliary canals, demonstrating the true mechanism of the reflux of the bile from the ductus choledochus into the gall-bladder. M. Amusat has discovered, and shewn, the existence of a spiral valve, a sort of Archimedes' screw reversed, with which the cervix of the gall-bladder is furnished. M. Amusat made several curious experiments, in presence of the assembly, in support of the new facts which he had discovered.

Cloquet's *Anatomical Plates.*—For accuracy of design, and for the fidelity and beauty of their execution, the anatomical plates of Cloquet surpass every thing of the kind hitherto published. Even those of Lizars, excellent as many of them are, are quite out-rivalled by the French publication. It will, therefore, we think, gratify our readers, to be informed that they may expect an English impression of these plates, executed in the first style of art, early this season.

MM. Arzaky *and* Serre *on the Roots of the Optic Nerve*.*—M. Arzaky, a native physician of Epirus, finding that the roots of the optic nerve of fishes expands upon the hollow lobes placed immediately before the cerebellum, considers these lobes as responding to the tubercula quadrigemina, and that there remains to correspond to the hemispheres of the brain only the anterior solid lobes, called by others the knots of the olfactory nerve. In this point of view, the inferior tubercles can no longer be looked upon as analogous to mammary eminences. M. Serre, by his observations on embryos, has arrived at the same conclusions as Arzaky, so that we may consider the point established.

M. Isenflamm, *of Dorpat, on the Varieties of the Osseous Tissue* †.—The colour of the osseous tissue, like all other tissues, undergoes changes more or less manifest in different diseases. In a fracture, for example, the two extremities of the fractured bone become covered with a reddish matter, which serves to reunite them. When the blood is washed away, and the bone macerated in water, the osseous tissue becomes white. The same is true of callus, which, in spite of its reddish hue, arising from blood-vessels, is blanched by maceration; while, by the internal exhibition of madder, it takes a red colour, as bone itself does. In rickets, the bones, besides the softening which they undergo, become transparent, and resemble the bones of new born infants. In gout, on the contrary, the bones become hard, and approach in structure to ivory. In spina-ventosa, caries, and osteo-sarcoma, the bones, after being, for a time, greenish, become black, while in necrosis a portion of the bone resembles chalk. In morbid ossification of cartilages, vessels, muscles, &c., the resulting tissue is white, and altogether analogous to that of bone reunited by the process of inflammation. In phthisis and dropsy, the bones suffer a loss of part of their marrow, become partly infiltrated with water in their cellular parts, and are, at the same time, very hard and very white, parti-

* Cuvier—Analyse des Trauvax de l'Académie Royale.

† Anatomische Untersuschungen. Von H. F. Isenflamm. Erlangen.

cularly in patients who die in the flower of their age. Stall and Wrisberg have observed that the bones, as well as the cartilages, and the brain of icteric patients, are strongly tinged with yellow.

M. Oken *on the Analogies of the Pelvis* *.—This celebrated Danish inquirer seems to be following out the fanciful, though ingenious, speculations of M. Geoffroy St. Hilaire. One example will be enough, we think, to show the absurdity of the whole system. This we shall take from M. Oken's account of the pelvis. Our author has attempted to establish, in his philosophical osteology, that the genital apparatus is a second animal reversed—and that the posterior members and organs are a repetition of the anterior, but placed in an inverse position. The anus, of course, becomes, in consequence, a second mouth, or, according to the affected phraseology of Strauss, a second *buccal orifice*. In the same way the pelvis is merely an inversion of the shoulders to which it is analogous. Now, as the scapula, acromion, and the coracoid process forms, in man, the articular cavity of the shoulder, it becomes evident to M. Oken, that they are analogues of the ilium, the ischium, and the pubis, which form the same cotyloid cavity of the pelvis. In the *Didelphes*, the marsupial bones are analogues of the bones of the sternum, and in many *mammalia* the bone of the penis is an analogue of the hyoid.—Our readers, we imagine, have now had enough of the Danish anatomist.

Lizars' *Anatomical Plates, Part* 5.—This part contains two valuable and admirable dissections, illustrative of hernia, by Sir A. Cooper, as a supplement to Part IV. We cannot too strongly recommend these to our readers as the best elucidation of this important subject which we have met with. There are two plates which illustrate both inguinal and crural hernia, and as Mr. Lizars truly says, they "display a neatness of manipulation seldom equalled." Part V. itself contains the muscles and joints of the upper and lower extremities, and we need not say that they fully maintain the previous character of the work.

Dermott's *Anatomical and Surgical Plates*.—Mr. Dermott, a metropolitan lecturer of great industry and perseverance, has undertaken a series of plates illustrative of difficult subjects of anatomy and surgery. We wish him every success which his merit deserves in so laudable and useful an undertaking.

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* Oken's Isis. X. 1823.

II. PHYSIOLOGY.

In this department we have more experiments, both by home and foreign inquirers, than we can do justice to in our limited pages. We can, however, boast without vanity, that our Journal has hitherto been richer in Physiology than any of our cotemporaries; and we shall endeavour to maintain the distinction so far as our limits permit.

Dr. Copland's *Edition of Richerand's Physiology.*—The work of Richerand, which has long been considered the text book on Physiology, has lately been successfully rivalled by Dr. Elliotson's edition of Blumenbach, and nearly eclipsed by Magendie; but what is worse, Richerand has fallen far into the back ground, from not keeping pace with recent experiments and discoveries. This Dr. Copland has undertaken to remedy, in an Appendix of above 150 pages. The only subjects in this Appendix, not familiar to the readers of our Journal, are certain speculations of the Editor's concerning the ganglial nerves, (a sort of echo of those of Lobstein, whose name is not mentioned,) and a few other subordinate subjects, which, so far as they are speculative, we consider to be entirely out of place in an elementary work, being apt to mislead the inexperienced student. The Editor's theories of galvanism, electricity, and the vital principle, are obscure and fanciful in the highest degree, and ought never to have appeared in a text book. His avowal in the Preface, that he has not had room to illustrate his own views sufficiently, though he is ready to discuss them fairly, and give up such points as are proved to be untenable, would convince us sufficiently of the impropriety of their introduction in a text book, independent of their being, as they seem to us in many parts, altogether incomprehensible. Human rumination, inflammation, &c., belong, we conceive, to pathology, and not to physiology.

M. Magendie's *Physiological Experiments* *.—"Experientia docet," would be translated by Magendie, "Experiment unlearns;" at least his recent experiments tend to sap the foundation of all our former notions and facts deemed to be irrefragably established. He tries, for example, to shew by experiment that the olfactory nerves hitherto thought to be the immediate organ of smell, having nothing to do in the business.

Are the Olfactory Nerves the Organ of Smell?—

"To ask whether the olfactory nerve is the organ of smell, might at first view seem to expose the inquirer to ridicule. Who enter-

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tains a doubt on the subject? would be the answer; is it not a well established fact ever since anatomy has taught us the course of this nerve, its distribution on the olfactory surfaces, its large size in those animals which have the sense of smelling most perfect, &c. &c. I must confess that had this question been proposed a month ago, I should not have hesitated to answer in the affirmative, and that I should not have ventured to entertain a doubt respecting it: although in physiology and medicine, &c. it may not be useless to question the correctness of points which are apparently the best settled. Let those who are unwilling to doubt, believe as implicitly as they think fit. Wishing, however, this year to demonstrate in my lectures on experimental physiology, the different properties of the nervous system, I first endeavoured to shew by direct proof that the olfactory nerve was the agent of smell, an attempt which to my knowledge had not been made.

"My first experiment consisted in laying bare the olfactory nerves of a dog, twelve months old. I did not expect to find them sensible to the contact of foreign bodies, nor even to punctures; the greater part of the hemispheres of the brain was insensible to these excitements; indeed, neither pressure, nor deep punctures, nor extensive laceration, were followed by any symptom which indicated sensibility of these nerves.

"I was curious to see if the direct contact of a very fragrant substance would be attended with a similar result: with this view I placed a few drops of ammonia on the nerve; the animal at first did not appear to take any notice of it, but it soon gave proofs that it felt very acutely. I perceived this as soon as the liquid touched the sides of the nerve, and reached its inferior surface, and consequently the ethmoidal fossæ; I therefore believed that the ammonia had acted on the medullary part of the nerve, which, as is known, lies on the cribriform plate of the ethmoid bone, and that superiorly the grey substance had no sensibility. Inferiorly the white matter was endowed with this property.

"After having made these observations, I took the means for entirely destroying the olfactory nerves, being firmly persuaded that the power of smell would be entirely annihilated. What was my surprise to find the animal on the following day sensible to the powerful odours I put before it (ammonia, acetic acid, essential oil of lavender)! The sensibility of the interior of the nasal cavity had lost nothing of its energy; the introduction of the stilet was followed by the same result as on a dog, whose olfactory nerves were entire. This strange phenomenon recalled to my recollection a fact to which I had paid little attention the preceding year, because it was in such direct contradiction to the recognized opinions, that I attributed it, I know not why, to some fault in the experiment. I allude to a duck from which I had removed the hemispheres of the brain, and which survived eight days, presenting during this period different curious phenomena. It had among other strange things, preserved the power of distinguishing strong smells. I

shewed this animal, and submitted it to these various tests in my course at that time.

"To be perfectly assured of the fact, I destroyed the olfactory nerves of several other animals, and the results were exactly the same; but besides this, I made another important remark, that the sensibility which I had observed at the inferior surface of the olfactory nerve, only existed along the outer edges of the cribriform plate of the ethmoid bone, and from this I was induced to think that it might belong, not to the olfactory but to a filament of the ophthalmic nerve, which passes from the orbit to the nose, by an opening in the cribriform plate.

"This indication led me to suspect that the branches which the fifth pair sends into the nasal fossæ, were the organs by which the power of smell is maintained, after the destruction of the nerves of the first pair. In the human subject these branches are rather numerous, although of a middling size; they are composed, first—of the ethmoidal branch of the nasal nerve; second, of the naso-palatine of Scarpa; third, of numerous filaments which arise from the internal suface of the spheno-palatine ganglion. Altogether they are so arranged as to be distributed to all the parts of the pituitary membrane. I was not exactly certain as to the relation of the fifth pair to the nose of a dog.—I asked M. Desmoulins, extremely expert in such matters, to dissect with me this nerve, and we found that the ethmoidal twig is much larger than in men, and that it furnished rather a large number of small divisions in the upper part of the nasal cavity; we also found that the superior maxillary nerve is not formed by the spheno-palatine ganglia, that it sends into the inferior, lateral, and internal parts of the nose numerous filaments of a considerable size.

"In fine, I am indebted to the politeness of M. Ramon, visiting physician *de la Maison Royale de Charenton,* for a fact which appears to me to prove that it is not indispensable in the human subject for the exercise of smell, that the hemispheres of the brain should be entire.

"After several years of madness and delirium, it is very common to see persons fall into a stiff and torpid state, analogous to complete drunkeness; the legs totter, the movements are uncertain, the tongue impeded in its action; this state which nothing has been found to relieve, is followed by a total loss of the intellectual faculties; and in a short time death takes place. On examining the body, the hemispheres are found gorged with blood, the coverings of the brain inflamed, and frequently a complete alteration in the cortical substance. In individuals who present the train of symptoms above mentioned, M. Ramon has always found a continuance of the sense of smell, not only for strong and irritating smells, but even for odours much more light and volatile."

M. Bory St. Vincent *on Zoospermæ* *.—

"Zoospermæ inhabit without exception the seed of animals of

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all classes. It is in the epididymes that they are exclusively found, and only in animals in a state of puberty and fecundity. This fact has been already observed by the exact Gleichen; I have ascertained it for more than ten years past, by repeated experiments. To conclude that the zoospermæ are the necessary cause of fecundity, and that they are secreted by the testicles, would not be sound logic Hydatids, teniæ, &c. are not secreted by the viscera which serve for their residence; they find a suitable nourishment there, and a *habitat* appropriated to their organization; that is all.

"All that is necessary to obtain a good view of the zoospermæ, is to take a testicle either from a living animal, or one that is just dead, or at least before decomposition has taken place, and having made a slight puncture in it, place on the object-stand of a good microscope a portion of the drop of liquid which will escape from it. The zoospermæ will be there in such abundance that they will scarcely be able to move individually, and it will be difficult at first to distinguish them amidst the general agitation. But if this fresh semen be steeped in pure water at the temperature, or nearly at the temperature of the testicle, the animalculæ will be isolated, and we shall then readily see them with a simple lens, a line in thickness; they will appear like a small grain of rice, and their resemblance to tadpoles will strike the observer with astonishment. If we employed water at a lower temperature, the new sensation felt by the zoospermæ would make them roll into globules, and become motionless. Acidulated water would kill them immediately.

"It has been said that the zoospermæ can live only a few minutes on the object-stand of the microscope; this is a mistake: in general they live but a short time there, because the evaporation changing the nature of the liquid by thickening it, they cannot move in the mass; but if we keep semen, which has been either evacuated, or taken from a lacerated testicle, plunged in a glass of water at the temperature of the animal, and afterwards, without attending to the gradual cooling, taking care only to prevent putrefaction, which can be done for a considerable length of time, the zoospermæ will live. I have in this way kept them in small vessels for eight or ten days; and this experiment has succeeded, not only with the zoospermæ of frogs, but with those of mammiferous animals, and of man. The moment the preserved semen acquires the least smell, which is not peculiar to it, indicating the first degree of decomposition, the zoospermæ die irretrievably.

"The zoospermæ pass into the vesiculæ seminales, but they do not constitute semen; inhabiting the testicles, they are drawn from them by the fluid, which those organs secrete, as certain intestinal animals are drawn by different causes from the viscera which contain them. Perhaps their rapid motions may produce the mixture of different substances which compose semen capable of fecundating; this is the function which we may suppose them to perform in the animal economy. If these motions are wanting, the mixture may not take place, and the semen consequently remain

imperfect. To suppose that it is the animalcule which fecundates, is an idea hazarded, or revived by Buffon, which is by no means conclusive.

"I have calculated that in the semen of a strong and healthy man, a thousand zoospermæ, excessively pressed against each other, occupy the space of a square millimetre (half a line). The size of zoospermæ is not proportional to that of the animals which nourish them. That of man is nearly of the same size as that of the cock, and only twice as large as that of the silkworm. The bull's are somewhat larger than ours; those of the horse are somewhat less than those of the male ass, and yet the horse and the ass impregnate the same female, which would not happen if it was the animalcule which impregnated. The same thing would happen in this case which takes place with respect to globules of blood, on which I have remarked, as M. Dumas has also judiciously done, that an animal will live if you inject into its veins globules of blood of equal bulk, whereas he dies in convulsions if you employ for the injection globules of blood of a different bulk from its own. In general, the size of the zoospermæ is in the inverse ratio of the size of the animal; the smallest animals have zoospermæ proportionably larger, but many of them fewer in number. Reptiles produce the most considerable; those of fish have the longest tails, though it is more difficult to perceive them."

MM. Prevost *and* Dumas *on Spermatic Animalculæ* *.—In an excellent article on generation, in the last volume of the Dictionnaire de Médicine, by M. Adelon, the unpublished experiments of MM. Prevost and Dumas are stated, proving the doctrine which had become rather obsolete, that the spermatic animalculæ are essential to generation. The same experimenters deny the influence, if not the existence, of the *aura seminalis*, and prove, that the actual introduction of the semen into the uterus is indispensable to generation, though we are much inclined to agree with them, yet we pretend not to account for the anomalous instances of pregnancy on record, in which the hymen was unbroken, &c.

Dr. F. Lavagna's *Experiments on Menstrual Blood* †.—This young experimenter, the nephew of the celebrated discoverer of ammonial injections in amenorrhœa, has lately analysed the blood secreted during the menstrual discharge, and has ascertained that it differs from common blood only in containing little or no fibrine.

On the Moisture of Respiration.—M. Magendie has asserted, that the moisture of the breath does not proceed from the lungs, but from the water exhaled in the aerial and nasal passages during respiration. Drs. Paoli and Regnioli were led to doubt the

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* Dictionaire de Medicine. † Omodei Annali Universali Medicina.

correctness of this from a case of tracheotomy, in which the air passing through a canula in the wound, showed the presence of moisture at 4° Reaumur. A glass applied four inches from the canula was covered with moisture. They conclude that the moisture of the breath is formed from the whole surface of the respiratory organs; that it takes place from simple exhalation from the mucous membrane; and that all the oxygen consumed is employed in forming carbonic acid gas.

III. PATHOLOGY.

Dr. Forbes *on the Stethoscope and Percussion.*—The most prominent work on the subject of Pathology is a small work by Dr. Forbes, of Chichester, on the diagnosis of disease by means of the stethoscope and percussion, being partly translations from Avenbrugger, Corvisart, Laennec, and Collin; and partly of original cases and dissections, by Dr. Forbes himself. It is to our author chiefly that in this country we owe the knowledge of the stethoscope, and the sale of a considerable impression of his translation of Laennec's work, shews that the profession here have eagerly availed themselves of his labours. We strongly recommend the work of Dr. Forbes to our readers, as containing a magazine of most accurate and useful pathology. We shall, in our next, give a practical analysis of it.

Sutleffe *on Naevus Maternus.*—In a work entitled Medical and Surgical Cases, selected during a practice of thirty-eight years, by Edward Sutleffe, we find the following novel theory of birth-marks, which we think our readers will prefer in the author's own words, as his style is a perfect specimen of the *naïve.*

"The general opinion respecting such marks as a claret countenance, attracted the attention of Dr. Lowder, the obstetric lecturer, who, in order to show the fallacy of the usual reasoning, instanced a case in point:—Mrs. M ——, advanced in pregnancy, placed a bottle of port wine before the fire in frosty weather, to take off the chill, when, by an accident, the bottle was broken, and the contents spilled. Some of the party were superstitious enough to predict, that the child would be distinguished by a claret mark; but, on the birth of the infant, no discolouration was discernible. Since the days of this facetious lecturer, I have been introduced to another mode of explaining the phenomenon of marks upon children. Solomon says, there is "a time to embrace, and there is a time to refrain from embracing;" for want of taking heed to which simple rule, as far as my experience goes, all the afflicting occurrences of marks and distortions take place. The secreting

catamenia (scarlet, purple, or brown,) precludes the propriety of marriage privileges; and nature, when her laws are violated, fixes an indelible stigma upon the uxurious parties in their disfigured children; and, as if to publish the secret offence, generally deposits the fluid upon the conspicuous part; though it is by no means restricted to the face, I have known it to spread over the whole surface of the body, and the affliction aggravated by the dreadful calamity of an offspring both deaf and dumb."

Caries of the Cervical Vertebræ *.—" A soldier of the 10th garrison company (Prussian) was received into the military Hospital in consequence of a fever, arising from his being chilled when overheated. An emetic and some other slight remedies improved his condition: the disease appeared to be a rheumatic fever, with a local affection of the muscles of the neck: the improvement was only temporary; he soon relapsed, and complained of pain, particularly in the left side of the neck, which was increased by every motion of the head to the right side, and required the employment of frictions, blisters, &c. The amendment was still however imperfect: the disease again returned; the pain remained fixed, and at the end of five weeks the patient could with difficulty move his head forwards or to the right side: nothing could be detected externally in the affected parts but a small, deep-seated and moveable swelling, of the size of a hazel-nut, and which increased in size, notwithstanding the use of mercurial frictions, cataplasms, &c. After a time all the symptoms became more urgent: the patient could not leave his bed, and began to complain of a feeling of numbness in his left arm: the sensibility of the skin of this part was totally lost, respiration became affected, and he died in the fifteenth month of the disease."

Dissection.—" The muscles of the left side of the neck were found shorter, and the branches of the nerves more slender, and more red than on the right: the anterior arch of the atlas was carious, and the odontoid process of the second vertebra completely separated from the body of the bone. The body and the lateral processes were also carious, and the anterior ligaments destroyed. The medulla spinalis was in its natural state, but the membranes contained much water. The medulla was redder at the point of origin of the nerves forming the brachial plexus than in any other part. The brain was of its ordinary consistence, but the sinuses contained much blood."

M. Bayle *on Pathology of Gout.*—This active inquirer has published in the Revue Medicale an excellent paper on gout, of which we do not think the worse, that it leans to the humoral pathology. We shall here give a short abstract of his doctrines.

" Small calculous deposits have been found in the lymphatic vessels of gouty subjects; their perspirations sometimes form concretions, and become a substance of the same nature. Morgagni, Alberti, Plater, and others make mention of gouty persons who

* Graefe u. v. Walther's Journal, 5 ter. B. 4 tes Heft.

voided substances resembling plaster, gypsum, and lime, in expectoration, by the anus, the ears, and indeed the whole surface of the skin. All these facts, which we could multiply, tend to prove the proposition which we have advanced, viz. that the gout is a specific disease, *sui generis*, consisting in a particular alteration of some one of the humours, or in the formation of a particular morbid fluid."

"2. Gout may affect every organ, and all the tissues, although it more frequently attacks some than others. It is, then, a general disease, rather than exclusively belonging to one organ, or set of organs."

"3. The symptoms by which it manifests itself are inflammations, neuroses, hæmorrhages, phenomena extremely varied, which may exist alone, in succession or alternately, according to the intensity of the complaint, its regularity or irregularity, the predisposition of the patient, the influences to which he is exposed, and the state of his temperament. Gout is, then, strictly speaking, neither inflammation, neurosis, nor any organic lesion."

"4. Numerous circumstances, as the predisposition of the patient, a delicate constitution, a great nervous susceptibility, venereal excesses, long-continued irritations of the stomach, influence of a debilitating atmosphere, &c. may render the diagnosis of gout very difficult, by giving to it at one time the form of a neurosis, or of a succession of neuroses; at another time, of gastritis, or gastro-enteritis. In the first case, the nature of the complaint may be recognized by the hereditary predisposition, the shifting of the nervous symptoms, which, for the most part, only affect one organ at a time, and which leave one part completely to develop themselves in another; which are observed alternately in the head, the chest, the abdomen, and the limbs, which have an evident connexion with the wandering pains and swelling of the joints to which the patients are subjected, disappearing or diminishing when they are present, and *vice versa*. In the cases of gastritis, of enteritis, or gastro-enteritis occurring in old subjects, the diagnosis may be formed by some of the characters which we have pointed out, to which may be added the following:—The gastric symptoms of the complaint are always accompanied with vomiting, and frequently exist to such a degree as cannot be at all accounted for by the state of the general health; they are sometimes replaced by nervous symptoms, or an affection of the joints; they often continue for a long time without destroying the life of the patient, like ordinary gastritis, and preserving the same degree of acuteness."

Mr. Bayle *on Rupture of the Heart* *.—The same author has investigated the pathology of ruptures of the heart. The following are his remarks:—

"Although there is on record a certain number of cases

* Revue Medicale, Juillet.

of rupture of the heart, this affection is nevertheless extremely rare, in comparison with the other diseases of this organ, which are so frequent. No mention of this complaint is made in the works of Corvisart and Laennec, which have thrown such a lustre on this subject. Morgagni appears to be among the first who observed this complaint, (vide Lett. lxiv. No. 14, 15, and his Adversaria Anatomica.) Bohnius relates a case of rupture of the left ventricle near the origin of the aorta, and Bonet relates another. Senac (Treatise on the Diseases of the Heart,) quotes two cases, which did not, however, come under his own observation. In the Memoires de l'Academie des Sciences 1732, p. 428, two cases of the same kind are recorded. In the third edition of Corvisart's work one case is mentioned which came under the observation of Dr. Ferreus. In 1820, two distinguished physicians, Blaud and Rostan, published in the 7th volume of the Nouveau Journal de Médecine, and the other in the 68th Number of the Bibliotheque Médicale, two interesting papers, which contain each four cases of this disease. My friend, Dr. Andral, read before the Academie Royale de Médecine, in the sitting of the 12th of April, a very curious instance of this kind. On the posterior surface of the left ventricle of the heart there were five oblong perforations. In observing what these different cases present in common, we see—1. That of nineteen cases of rupture of the heart, fourteen occupied the left ventricle, and principally its anterior surface near the apex; three the right ventricle; one the apex; and another the inter-ventricular septum. 2. That in the majority of cases the heart was remarkably soft, and in some cases of a brownish colour around the perforation. 3. That of ten patients affected with rupture of the heart, one was between 50 and 60 years of age, another between 60 and 70, six between 70 and 80, and two between 80 and 90. 4. That of the same number of patients, eight died instantly, one at the expiration of about two hours, and another at the end of fourteen."

IV. MORBID DISSECTIONS.

M. Louis's *case of softening of the Stomach.**

"A woman, aged seventy-seven, who inhabited La Salpêtriére for eighteen months, and had quitted it only for two, attributed to the diet of the house the little appetite which she had felt for some time. Some charitable person who attended to her tried to make her take some delicate nourishment, but scarcely had she swallowed some mouthfuls when she found herself satiated: she took soup only with pleasure: there was neither nausea nor vomiting, nor pains at the epigastrium (at least, those who saw the patient constantly and several times a-day assured me of it): she had had a cough for about twenty years, complained only of her asthma, and

* Archives Générales.

was carried, at the third month after her exit from La Salpêtriére, to the Hopital de la Charité, where she was unable to render a satisfactory account of her condition, and died eight days after her arrival, without having had any vomiting. On dissection, tubercles and tuberculous excavations were found in the lungs: the heart was sound, the liver in its natural condition; the stomach slightly greenish at the exterior of the great *cul-de-sac*: internally, in the corresponding place, and of the size of the hand, it was of a greenish or bluish white colour, and traversed at this part by a great number of large, empty vessels: the mucous membrane, where the greenish colour existed, was softened and devoid of consistence: in the majority of the portions where the colour was white and bluish it was wanting: in the remainder of its extent it was of a fawn colour, and of a natural thickness and consistence; its edges gradually settled down to the circumference of the diseased part: the demarcation between the injured portion and that which was not so was, however, extremely evident."

M. Bayle's *Case of Softening of the Spinal Marrow**.—A woman, aged 52, a sempstress, had at first lancinating pains in the chest and abdomen, and afterwards in the pelvis and lower extremities, inability of walking, and convulsive affections of the legs, with shooting pains. At the base of the tenth dorsal vertebra was a tumour, in form like the brain, and posterior to the spinal marrow. Some time before death the legs were bent back, with the heels pressed against the nates. After long suffering she died.

Dissection.—"Lungs excavated, and filled with tubercles. Left lung adhered throughout to the pleura costalis of the side attacked with the inflammation. The articulations above-mentioned, contained a purulent liquid: their cartilages were irregular, and appeared destroyed in certain points. The brain was sound; the cerebellum in good state, excepting that on each lobe, posteriorly, there was a small band from an inch and a half to two inches long, of a white, firm, hard substance, composed of decussated fibres, and which adhered very intimately to each other."

"The spinal marrow was healthy as far as the level of the tenth dorsal vertebra, where there was found on its posterior part a tumour contained between two small folds of the arachnoid. This oblong tumour, about two inches in length, and placed lengthways in the spinal canal, was slightly furrowed on its surface, of rather a firm consistence, a reddish white colour, intersected by small vessels which penetrated into its interior. When cut, it appeared composed of a homogeneous matter, somewhat resembling the substance of the brain, but more firm, of a light rose colour, and presenting when torn, small but very distinct granulations. There were numerous minute vessels going in every direction; the tumour did not ad-

* Revue Medicale.

here in any point to the spinal marrow, which in every part corresponding to it, was softened to the consistence of thick paste, to the extent of about two inches, and which towards the most bulky part of the tumour, appeared cut transversely, so that the two portions separated by a small space, representing two cones resting against each other by their tops. After a very attentive examination of the softened portion of the marrow, no single fibre could be discovered which had not undergone this alteration. The limbs were wasted; the nerves did not appear diminished in size."

Dr. MILLET's *Case of Wound through the Chest* *.—The following is a very interesting dissection, as it tends to corroborate the opinion of Dr. Williams, that the lungs during respiration do not fill the interior of the pleura.

"On the 7th of May, 1824, a man, about twenty years of age, on the evening of his wedding-day, plunged a very sharp cook's knife in the interval between the sixth and seventh rib, on the left side, and towards the sternum. He immediately fainted away. The medical men who were called in, judging from the situation and direction of the wound, and the marks of blood upon the knife, that it had penetrated about two and a half inches; the symptoms announced an internal hœmorrhage, which appeared to cease for a time: it, however, soon recurred, and the man died thirty-four hours after committing this desperate act. The body being opened, the following appearances presented themselves:—The knife had penetrated the cavity of the thorax for the space of an inch, but the lung was not wounded; yet there was a considerable effusion of blood on that side, arising from the wound of an intercostal artery. At the spot where the diaphragm was wounded, a sound was stopped in consequence of the protrusion of a portion of omentum. In the abdomen, the stomach was found pierced to the extent of three lines, at its anterior and superior part; and an effusion of blood had taken place into the colon, extending to the hypogastric region."

V. SURGERY.

Since the late successful case of amputation at the hip-joint, by Sir A. Cooper, the subject has acquired great interest, and this we hope will apologize for the length of the following paper:—

Case of Amputation at the Hip-joint, with Remarks. By Professor VON WALTHER, of Berlin †.—

"Antony Müller, a peasant, aged 21, was born of healthy parents, and in his youth was of a sound and strong constitution: there were not any external signs of the previous existence of scro-

* Revue Medicale. † Graefe and Walther's Journal.

fula or psora, and the ordinary infantile diseases had not been attended by any bad consequences. He had always lived in penury, on a coarse and scanty diet, working hard, and being exposed to the weather.

"In his 14th year, and without any known cause, a swelling, unattended by pain, presented itself on the outside of the right thigh, and at one-third of its length from the top. The swelling increased very slowly, and at the end of four months had reached the size of two fists: it then became painful, the skin grew red and thin, and in a few weeks it burst, and gave issue to a moderate quantity of turbid, purulent, bloody fluid. After a variety of treatment, the fistula closed; but matter continuing to form in the deep-seated parts, another swelling formed on the inside of the thigh, which burst in two places. Subsequently, the cicatrix on the outer side also gave way; and in this manner they constantly continued to open and close alternately, for the space of six years; during which time the patient, though with great difficulty, continued to work, his constitution also being much impaired.

"In this condition he was so unfortunate as to have a complicated fracture of the diseased limb: the wheel of a loaded cart passed over his thigh, and broke it in the upper half of its length in two places, and with several splinters of various sizes. He was unable to procure any suitable attendance; violent inflammatory swelling ensued; the previous suppuration extended itself in all directions; the spaces under the fasciæ, and between the muscles, were filled up with matter; the former fistulæ became larger, and new ones formed; and by the action of the muscles, the lower part of the bone was so much drawn up that an inch of it projected at the inner and back part of the thigh.

"In addition to all this he was hectic, had night-sweats, colliquative diarrhœa, and commencing gangrene over the sacrum. As he was unable to move, and every attempt gave him pain, he lay for several weeks on straw (in a stable); so long, in fact, that the straw, impregnated with matter, began to putrefy, and smelled most offensive.

"He was found in this condition by the district physician, who, having examined him as perfectly as the state of the patient, and the darkness of the place would permit, explained the impossibility of recovery without amputation; and having obtained his consent to it, procured his admission into the surgical hospital of the University of Bonn.

"On his arrival, Professor Von Walther found him as above described: the whole thigh was swelled, and painful up to the groin, from the shaking of the broken fragments during his transport in a common cart over bad roads. A probe, passed into the fistula, ran up the thigh almost to the groin, and came in contact with the bone, which was bare. His appetite, digestion, and breathing were good, and he was not extremely emaciated. The suppuration was profuse; the matter bloody and ill-conditioned. The ulcer in the

sacrum was superficial, but as it was impossible to put the patient in any posture, by which it might be relieved from pressure, its healing could hardly be expected.

"No evident improvement was discernible at the end of six days, notwithstanding a good diet, care and cleanliness, poultices, opium, calumba, and lichen-islandicus were employed, except that the swelling of the upper part of the thigh was reduced, and the pain much lessened by the removal of some loose splinters of bone.

"The necessity of amputation was obvious, and equally so the certainty that it must be performed at the hip-joint, an operation which Professor Von Walther conceived the patient unable to support. He, therefore, prepared to dismiss him from the hospital, a resolution which the patient, gratified by the attention paid to him, heard with great regret. His mother too, and the district physician, stated, that in that case no other fate awaited him than to lie in a stable on putrid straw, starving, and waiting in a miserable condition the approach of an unavoidable death; whilst in the event of an operation, his recovery was, if not probable, at least possible. These considerations induced Professor Von Walther to change his determination, and to perform the operation on the day following.

"He proceeded to execute it in the following manner: The patient was placed nearly horizontally, with a slight elevation of his head and shoulders, on the operating table, his breech projecting over its edge: he was kept steady in this posture by several assistants: the sound limb rested, with the foot on a stool, and was also secured by an assistant: the diseased one was placed horizontally, carried outwards, and fixed by two assistants, of whom one held the upper fragment of the broken thigh, and the other the remaining parts of the extremity.

"Another assistant, standing on the right side of the patient, opposite the hip, compressed the femoral artery with the pad of a compressorium, where it passes over the horizontal portion of the os pubis. Professor Von Walther then grasped with the whole of his left hand a large longitudinal fold of the integuments and subjacent parts on the outer side of the hip-joint; in his right he held a large, pointed, and double-edged knife, which he thrust three inches below the anterior, superior spine of the ilium, at the outer edge of the sartorius muscle, perpendicularly through the skin, the fascia, and tensor vaginæ femoris, down to the neck of the femur. The handle of the knife was then inclined inwards, and its point passed round the neck of the femur in a direction outwards and backwards; it thus passed in a curved line along the pit formed by the upper part of the great trochanter, and was brought through the skin three inches and a half behind that process, and at about the same height as the point at which it entered. The edge of the knife was then directed in the following manner: first, somewhat upwards, so as to clear the top of the great trochanter, and to get clearly out of the pit behind it; then, perpendicularly downwards, first along the outer side of the trochanter, and then along the fe-

mur close to the bone; in the last place, at about two inches below the base of the trochanter, it was turned obliquely outwards, cutting first through the muscles, then through the integuments, and in this way completing the first flap, which was an external, and not a posterior one; it had a valve-like oval shape, and consisted of the integuments, the fascia, the greater part of the tensor vaginæ femoris, and small portions of the gluteus maximus and medius. The outer edge of the sartorius was exposed, but the muscle itself untouched.

"Here Professor Von Walther remarks, that if this first stage of the operation be performed on the dead subject with the vessels injected, it will be found that the only vessels divided are some branches from the external circumflex artery of the thigh, and that the femoral artery and vein are full an inch distant from the anterior edge of the flap, whilst the ischiatic artery, will be found close to its posterior edge, and the ischiatic nerve almost exposed. In order to avoid dividing the ischiatic artery, (in this stage of the operation,) the operator must avoid carrying the incision in this first or external flap too far backwards; for which reason, Professor Von Walther would make it smaller (if necessary) and keep more to the front of the limb. The consequence of a careful attention to these rules in the case before us, was, that no vessels of importance presented themselves in the external flap; of course it was not necessary to apply any ligatures, and Professor Von Walther was enabled to proceed with the operation without experiencing any delay from that source.

"The first flap was raised and everted by an assistant, and at the upper part of the angle between it and the rest of the limb, the capsule of the joint was seen to be exposed at its upper and outer part, and it was easily opened, when in a state of extension, by means of a large bistoury. Professor Von Walther thought it advisable to retain as much of the capsule as possible for the purpose of covering the cavity of the joint, in the same manner as he (Salzburg Med. Chir. Zeitung.) and Brünninghausen (vide Jour. of For. Med. Vol. 2. p. 70.) have proposed to retain portions of the periosteum for covering the ends of the bone in common amputations.

"In the next place he proceeded to disarticulate the head of the bone: for this purpose the thigh, which had hitherto been kept in the line of the axis of the body, was carried horizontally inwards until it formed a right angle with it, and at the same time turned so that the toes and the front of the knee were directed upwards. To this latter point Professor Von Walther attaches much importance; for, according to him, it is only when the limb is carried into a state of adduction, so as to form a right angle with the trunk, the points of the toes being at the same time directed forwards, that the disarticulation can be effected with certainty and facility. By this method the ligamentum teres was rendered tense, and was cut through with a small knife carried into the joint round the head of the femur, which the operator's left hand, not otherwise engaged, served to press outwards and downwards.

"A single-edged amputating knife was then carried through the joint, behind the head of the femur and round the trochanter minor, the same moment that by a combined motion of the assistants, the limb was once more brought from a state of adduction to a nearly straight position. In order to carry the knife with facility round the head of the bone, says Professor Von Walther, it is necessary that the change in the position of the limb should be very gradually effected by the assistants, and that it should be simultaneous with the progress of the knife in the operator's hand, by whose proceeding they must be guided.

"The remaining part of the operation consisted in the formation of the internal flap; the amputation knife was carried for the space of two inches along the inner side of the femur; in doing so, the only caution necessary was to avoid coming in contact with the trochanter minor, with which view the edge of the knife was slightly raised as it passed along that part of the bone: in this manner all the muscles on the front, the inside, and the back part of the limb were completely separated from the bone, whilst the femoral, nay even the ischiatic vessels were yet undivided. An assistant then placed the thumbs of both hands in the wound, and close to the almost detached femur, whilst, with the remaining four fingers of each, he grasped the soft parts at the inner and upper part of the thigh, including the femoral artery and other great vessels, in that way commanding the flow of blood through them, and facilitating their subsequent division. Professor Von Walther advises that the assistant's hands should be applied as high as possible; first, because there the great vessels lie close together, and can be more securely compressed; and secondly, because there is less chance of his being wounded by the knife. The amputation knife having, as already stated, been carried two inches below the trochanter minor, was directed obliquely downwards and inwards, making an incision through the muscles, vessels, nerves, and last of all, through the skin. The formation of this internal flap, though to the patient the most painful, is to the operator, according to Professor Von Walther, the easiest part of the operation. The latter has only to take care that it is not too small, nor yet so large as unnecessarily to increase the unavoidably great surface of the wound;—that the skin is cut through sufficiently low; that the edge of the incision in it has as much a semicircular form as may be (for perfect precision in this respect is not to be expected); and lastly, that the incision shall form a continuous line without any angles or interruptions.

"The internal flap contained the largest and most important muscles of the thigh: the bulk of it was formed by the adductores, with which were connected the gracilis, pectineus, sartorius, and rectus superiorly, and inferiorly the obturatores, gemelli, biceps, semitendinosus and semimembranosus. It contained also the crural and ischiatic nerves, (of which the latter occupied precisely the point of union of the two flaps,) the femoral artery, the profunda, the obturator, the external circumflex, the ischiatic, and numerous

branches partly of the above vessels, partly of the gluteal. After the formation of the second flap, the next step was to tie the vessels with all possible celerity, which was effected without any difficulty, the loss of blood not being greater than in an ordinary amputation. The vessels tied were the femoral artery and profunda, the femoral vein, the obturator artery, the external circumflex, the ischiatic, and six smaller ones: the femoral artery and vein were tied with a double silk thread, the other with a single one, and according to Professor Von Walther's practice in all amputations, and in most other operations, the ligatures were cut off close to the knot.

"The external and internal flaps, in which the muscles had retracted but little in consequence of being divided near their origin, admitted of being applied to each other without any dragging or extension, so that the surfaces mutually covered each other, and the edges of the incisions in the skin met in almost uniform contact. The internal flap in particular was kept up by very long pieces of adhesive plaster of suitable width, fixed at the upper part of the hip and stretched over the buttock. The remainder of the dressing consisted of a simple superficial, retentive and compressive apparatus, formed by coarse charpie, several compresses, and a circular bandage of appropriate breadth.

"The patient bore the operation well, and only took a few spoonfuls of wine during the time of its performance. He was well also during the hours immediately succeeding; but in the afternoon he was seized with a shivering fit, during which his pulse was small and contracted, his skin cold and damp. These symptoms were relieved by warm wine and ether sulphuricus. In the night he had several hours, broken, yet tolerable, rest, and in the morning complained of no particular pain except in the gangrenous ulcer on his back. The dressing was soaked through by a copious serous fluid; the diarrhœa had ceased since the operation; the profuse sweating too had diminished; the skin was moderately warm, and the pulse somewhat frequent. His spirits were good; his tongue moist; thirst considerable.

"On the fourth day the dressings were changed: the plasters had been detached in several points by the copious discharge of their matter, and the internal flap was somewhat retracted, so that the wound gaped a little; but nevertheless incipient union was visible at the angles. On the fifth and sixth days the appearance of the surface of the wound on both flaps was much improved: good, thick matter with healthy florid granulations had formed at several points. The pulse had lost its hardness; it was moderately frequent, but febrile in the fore part of the day. Considerable thirst, night sweats, and a painful state of the ulcer on the sacrum still continued. Various attempts were made to change the position of the patient, so as to relieve the ulcer from the weight of his body; but in vain: all failed, as he could only bear to lie horizontally on his back. Under these circumstances, the ulcer on the ninth day

was gangrenous, and a new attack of fever and shivering made its appearance. The pulse sunk considerably on the following night, which the patient passed without sleep, and with frequent delirium. The wound of the amputation had still a tolerable good appearance. On the next evening he had another shivering fit, and passed the night in a state of constant delirium, with a small and very quick pulse. The extremities became cold, and he died tranquilly about six on the morning of the eleventh day.

"The body as well as the amputated limb were carefully examined in the Anatomical Theatre by Professor Mayer. All the organs of the chest and abdomen were perfectly healthy. The inguinal glands on the right side were swelled. The surface of both flaps, excepting the discolouration and other changes which had taken place since death, presented every appearance of a speedy union. There was not any evident change in the state of the cavity of the joint, except that the cartilage was somewhat softened, and the end of the ligamentum teres contracted and about to separate. In all the arteries the usual plug of lymph was found behind the ligature, but in none of them was longer than five lines. There was also a similar plug in the femoral vein, but not any diffused inflammation of its inner surface. The crural nerve was not inflamed, but in the ischiatic, the neurilema for about an inch above the point of action was somewhat reddened.

"In the amputated limb, the fractures were found to be in the upper half of the bone; the middle portion between them was not in contact either with the upper or the lower end of the bone: it was merely connected with the soft parts, was in a state of necrosis, and would speedily have separated. The broken surfaces were rough and carious. The head and cervix, the trochanter major and minor, and the condyles were the only sound parts of the bone: the rest being swelled, rough, carious, and separated from the periosteum, which was thickened, and in some parts ossified.

"Professor Von Walther next proceeds to make some critical remarks on some other modes of performing the operation when compared with that he practised. He condemns M. Larrey's plan, in which the femoral artery and vein are tied before commencing the amputation; but as it has few advocates, we shall pass over his remarks. He himself causes the artery to be compressed with an oval pad attached to a suitable handle, which answers the purpose so effectually, that he advises the operator after the removal of the limb, to apply a ligature to the femoral vein, and to the minor arteries, before attempting to tie the femoral, from which the compression prevents the escape of a drop of blood. Another objection to Larrey's operation is, that he commences with the formation of the inner flap which contains all the principal vessels, so that if, as sometimes happens, there should be any difficulty in disarticulating the bone, much blood would be lost before the vessel could be secure

"Mr. Gutherie's method appears to him to be very difficult, and to

be attended with many disadvantages: in particular, as he begins with the posterior formation of the flap, the ischiatic artery must be divided at the very commencement of the operation, and there will consequently be bleeding and a necessity for delay, in order to apply a ligature to it."

His own operation bears some resemblance to the mode recommended by Lisfranc and Maingault, with which he was unacquainted at the time. The points of difference are, however, sufficiently striking, and in every respect in favour of Professor Von Walther. In the process of the French surgeons, the flaps are anterior and posterior, or nearly so, consequently in the formation of the posterior one many large arteries must be divided, and will require to be at once secured. In Professor Von Walther's, on the contrary, the first flap is external, with scarcely any inclination backwards, and does not affect any arteries requiring ligature. Maingault's method, which, from being the latest of the two, may be considered as an improvement, makes a nearer approach to this, and forms a medium between that of Walther and Lisfranc. The second point in which the German differs from the two French surgeons is, that he disarticulates the bone before forming the internal flap, and of course before dividing the great vessels. When the second flap is formed before detaching the bone from the joint, many vessels must be at once secured in the middle of the operation, and which in the incisions necessary for separating the head of the bone, may possibly be divided a second time; and independent of this, the ligature of the arteries is much more easily and securely effected after the bone is removed than at any other period, when the operator's attention is naturally distracted by other important steps of the process.

Professor Von Walther thinks also, that the formation of the internal flap is easier and less painful for the patient, when performed after the disarticulation of the head of the femur, than when these stages of the operation are reversed. By his method, all incisions for exposing the inner and front part of the capsule are rendered unnecessary; and once the capsule is divided, the remaining part of the operation consists in a single incision passing through the joint, round the head of the bone, continued along its shaft, and then obliquely through the muscles, but transversely through the skin. "On the subject," says he, "the amputation, performed in this way, may be finished more easily and more quickly, than many amputations of the fingers at the joint."

Dr. Quadri's *Case of Diplopia* *.—The following singular

* Osservazione Mediche.

case of Double Vision, cured by operation, is given in the Medical Observations, by Dr. Quadri, of Naples :—

"After having used all the most energetic remedies in vain, he conceived that the disease was owing to some affection of the optic nerves, and ordered the patient to take Richter's pills. The patient, however, became worse; and, on examining the eye, the iris appeared sound, the movements of the pupil regular and rapid; there was no spectra, or small objects, complained of as floating before the eyes, so common in cases where the nerves are affected. Dr. Quadri conceived the disease to arise from pressure, made by a superabundant quantity of cellular substance at the inner angle of the right caruncle, which threw the eye out of the centre of the orbit; and he was confirmed in that opinion upon finding that the diplopia disappeared when the eye was carried inwards or upwards. The author, therefore, laid open the right caruncle, and, by means of a small pair of forceps, took away three small pieces of cellular substance; the wound healed by the first intention, and the patient was relieved. This encouraged M. Quadri to repeat the operation some few days after, in the same manner, and to the same extent. After this second operation, the wound was closed with a point of suture and adhesive plaster. The inflammation after this operation was more considerable, but was relieved by leeches, and the wound healed in a few days. The disease was quite cured. M. Quadri conceives that the inflammation which took place after the last operation, increased the density of the cellular substance, so as to destroy the tendency to grow, which it had before evinced."

Extirpation of a large Sarcomatous Tumour from the Back, by Dr. Benedict *of Breslau.*

"Elizabeth Langner, of Dyhrenfurth, in Silesia, aged 47, was admitted on the 1st of June, 1823, into the surgical hospital at Breslau, on account of a tumour upon her back. The patient was strong and healthy, and had had six children. In her first delivery, her 22d year, she perceived during the pains a sudden noise in the region of the upper part of the sacrum, as though something had been torn. During this confinement she also remarked a swelling in that situation; it was at first of the size of a walnut, and did not increase very rapidly. After employing various measures without success, the patient abandoned it to nature for several years. Her health continued good, but the tumour increased, and laterly was attended by occasional pains. Twenty-two years after its first appearance she applied to a quack, who made a puncture and introducedtents, with irritating ointments into the wound. This however produced no change in the swelling: the wound remained open and formed a fistulous ulcer, discharging a moderate quantity of thin lymph. The tumour still increased, and the patient, weary

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* Graefe u. v. Walther's Jour. 5ter. B. 3tes. H.

of such a burden, applied for Dr. Benedict's assistance. She boldly and prudently resolved to submit at once to an operation, as soon as she had learned that it afforded the only means of relief.

"The tumour caused very considerable deformity: it extended from the lower part of the shoulder blades down to and even beyond the sacrum, and extended laterally in such a manner as to include the whole of the middle and lower parts of the back. Its length upwards was of twenty-two inches, its breadth was twenty, and its greatest diameter, from within outwards, was about seven. At the point where it projected most it formed two folds, an upper large, and a lower small one, the latter of which occupied the spot where, according to the patient's account, the disease began. The whole tumour was moveable. Excepting the middle part which projected most, and which presented many considerable varicose vessels, the integuments covering it retained their natural appearance and structure. The ulcer already mentioned had not closed, but was of a florid colour, and secreted a moderate quantity of matter. When sleeping, the patient was obliged to lie either on her side or belly.

"On the 13th of June, Dr. Benedict commenced the operation, in the presence of many physicians and students. The patient was placed on her belly, and two semi-lunar incisions made, including the ulcer and the varicose vessels already mentioned. Several arteries were divided, and at once secured, and the extirpation of the upper half commenced by separating the skin from the tumour, the edge of the knife being directed towards the latter. At this moment some difficulty was caused by the forcible protrusion of the folds in the tumour, which were no longer confined by the integuments, and impeded the operation, so as to require to be kept back by the hands of several assistants. The separation of the posterior surface of the tumour from the muscles of the back was effected by the finger, where the connections were loose, and elsewhere by the knife. In the next place the lateral portions, and then the lower part of the tumour were separated, first from the skin covering them, and then from the muscles of the back. The middle part of the posterior surface only remained attached, and appeared to be more firmly connected with the muscles than the rest of the tumour: a strong ligature was passed round it, and it was then cut off. This root of the tumour however immediately came away, together with the ligature, and without any hæmorrhage. A small portion of the left half of the tumour, which had accidentally remained attached to the skin, was then separated, and the extirpation thus completed. Excepting the vessels tied in the commencement, very few required ligature. Cold water and alcohol sufficed to check the bleeding, the slightness of which proved the inoffensive nature of the disease.

"As too much skin appeared to have been left at the lower part of the wound, a part of it was removed, and the edges of the incision brought together with seven sutures made with twine. The remainder of the dressing consisted in long, wide strips of plaster and

compresses laid on the edges of the wound, and supported by a double headed roller.

"The patient bore the operation with great courage, and only once cried out; she even asserted that the pain was by no means so great as is experienced during labour. It is unnecessary to detail the farther particulars. Partial sloughing of one side of the upper part of the wound took place, and repeated collections of matter at its lower part rendering incisions necessary. The case, however, terminated favourably, and the patient was well on July 22d.

"The extirpated mass was of a yellow and whitish yellow colour, with a loose cellular texture, somewhat like that of the lungs: in this respect it differed much from common fatty sacroma. It contained but a very few small vessels. At its lateral edges were many little projections connected with the main swelling by broad bases. The weight of the whole was full thirteen pounds."

Amputation of a portion of the Scapula. By Dr. Haymann, *of Coblentz**.

"The patient, a young man of 22, had, in his 17th year, violently contused the left shoulder-blade by a fall, and again injured it three years afterwards. Two years from the last period a painful swelling began to form, which soon reached the size of a fist. A seton was introduced, but only tended to accelerate its growth. At the end of five months the bulk of the swelling was enormous; it was a foot long, nine inches broad, and raised eight inches above the surface of the back: It was immoveable, and concealed all the scapula, excepting the acromion. The patient was reduced and hectic. The opinions of the surgeons in Coblentz were divided, but Dr. Hayman resolved on removing the disease, and proceeded to do so, May 13th, 1823. As soon as the skin on the surface of the tumour was divided by two semilunar incisions, and the subjacent tendinous expansion cut through, it became evident that the swelling was connected with the scapula, or rather that it grew from its substance. It was now cut from the bone with a strong knife, the surface of the incision presenting a jelly-like appearance mixed with fragments of bone. The spine of the scapula was then obliquely sawn through, so as to leave the acromion and a portion of the scapula above the spine, removing the inner half of the spine and the whole of the upper and inner angle of the bone. The tumour weighed ten pounds: The loss of blood was considerable, and the patient fainted: the dorsalis scapulæ, the branches of the transverse, circumflex, and subscapulary arteries, however, though divided, did not bleed much, and did not require ligature.

"The greater part of the muscles covering and attached to the scapula were removed with it, and some remaining portions of the tumour required to be removed. The ribs could be clearly perceived in this large cavity left by its excision. It was filled with rolls of charpie, the edges brought together with adhesive plasters, &c. In the evening the patient had recovered from his depression.

* Graefe u. v. Walther's Journal, 5ter, B. 4tes. H.

On the fourth day, when the dressings were removed, the wound had a tolerable appearance and the edges could be more approximated. Some small exfoliations took place from the edge of the bone, where it had been sawn, but the greater part of the wound healed favourably. In the eighth week it was nearly closed, and the patient strong and healthy. The upper arm could be freely moved in most directions; its elevation only was impeded."

Extirpation of half of the Lower Jaw *.—The patient was a woman aged 34, who had for some time had a very painful osteo-sarcoma of the left half of the lower jaw, as large as two fists, bleeding at every touch, impeding speech, breathing, and mastication, discharging offensive matter and producing hectic fever. Professor Graefe began by making a perpendicular incision through the middle of the lower lip, which he continued along the base of the left half of the jaw, as far as the ascending branch, and in that way exposed the outer and under surface of the diseased mass. The soft parts being held aside he introduced a curved knife into the mouth, and separated the left half of the jaw from all its connections. In order to defend the neighbouring soft parts he passed two straps behind the bone, one, an inch wide, at the chin, another, two inches wide at the situation of the last molar tooth. Upon these he divided the bone with a small saw, first in front, and then close behind the last grinding tooth. The detached piece of bone was then taken away, and the sawn ends of the remaining portions rounded off. All the vessels which had been divided before the sawing of the bone had been secured at the time, so that the only remaining one was the artery running in the canal in the bone: the bleeding from this was stopped by introducing a little bit of sponge. The lip was brought together by the twisted, the wound in the cheek by the common, suture. Eighteen days after the operation the patient could speak plainly and chew solid food with the right half of the jaw. In three weeks the whole was healed. The deformity was very slight, as the incision formed a mere line, and as the cheek had acquired a degree of firmness sufficient to preserve the form of the face.

It seems rather strange that this operation should not have been performed in Britain until very recently, though it has proved so useful in the hands of Graefe, Dupuytren, Mott, and others. That the cases in which it may be performed are not rare may be well conceived from Graefe's statement, that in 1823 he practised it to a greater or less extent in no less than five cases. *(Jahres-Bericht des Chirurg Augenarztliche Instit. zu Berlin für* 1823.*)*

* Graefe u. v. Walthers Journal 6ter. B. 1ster. Heft.

VI. PRACTICE OF PHYSIC.

CALVERT'S *Practical Treatise on Diseases of the Rectum and Anus.*—This is almost the only British work on our table worthy of notice in this department. It consists of an improved copy of Mr. Calvert's Prize Essay on the Diseases of the Rectum and Anus; and as it appears to be deserving of a more extensive analysis than we have room for here, we shall reserve it for next Number.

Dr. HUME'S *Reply to* Dr. SANDERS.—In espousing the cause of our correspondent, Dr. Hume, in last Number, we perceive we committed the mistake that Dr. Hume was unacquainted with Dr. Stewart. That, however, does not much alter the state of the case with regard to Dr. Sanders. The following is Dr. Hume's own statement:—

Hamilton, July 18th, 1824.

"In consequence of a letter published by Dr. Sanders, I am induced to state the following particulars. The account which I gave of Dr. Stewart's system was received from his own mouth, in presence of Dr. James Dalzel, formerly surgeon to the Naval Hospital at Madras, who will vouch for the correctness of the statement, in so far as it goes. I made it public for the benefit of the profession, and did not conceive I was violating any principle of honour or politeness in doing so, as Dr. Stewart certainly made no secret of the matter. At this distance of time (the conversation having taken place a short while before the date of my paper) I cannot recollect every particular expression which that gentleman made use of, but I well remember, that he was very full upon the subject, and gave us the whole train of reasoning by which he had become a convert to the tonic treatment. The ground-work of the whole, I think, was the presumed analogy betwixt scrofula and tubercular phthisis, in the treatment of which diseases, he shewed to us that Dr. Gregory was at variance with himself, by treating the one with the tonic, and the other with the antiphlogistic regimen. I have not learnt when Dr. Stewart became a convert; but Dr. Gregory's very flattering approval of his system was contained in a letter from that celebrated physician, to a baronet of this county."

*On the Egyptian Ophthalmia and its treatment in England, by Dr. Radius, of Leipzic**.—Though not containing any positive novelty, yet this paper may probably prove interesting to our readers, as being the result of the observation of a foreigner on the English modes of practice. The author resided in London, from November 1822, until April 1823, and his letter is published by

* Graefe u. v. Walther's Jour. 5 ter. B. 2 tes. H.

order of M. Von Hake, the Prussian Minister of War, to whom it was addressed.

"The most distinguished English ophthalmologists," says Dr. Radius, "and the majority of the profession, do not consider the Egyptian ophthalmy as a specific disease, but merely a common purulent ophthalmy, with which it coincides in all respects, excepting the greater degree of severity, with which it is attended under certain circumstances. I allude in particular to Messrs Travers, formerly surgeon to the London Eye Infirmary, Lawrence and Tyrrell, his successors, and Guthrie, surgeon to the Westminster Eye Infirmary. As to its origin, they are as much, or even more, at variance with one another than the Germans. Some of them, Sir W. Adams is the chief, suppose it to have been brought from Egypt: others on the contrary, as Lawrence, Wardrop, &c., believe that it has always existed in England, but had been overlooked, partly because of its rare occurrence, partly because of the little attention formerly paid to diseases of the eyes.

"As to infection, it is agreed on all sides that it is right to proceed as if it existed, and to employ suitable precautionary measures. Several instances proving its infectious nature are too well known, to require any notice; but at the same time there is no inconsiderable number of cases proving the reverse, and throwing doubts on its communication, even by contact. An English surgeon in Sicily introduced some of the purulent matter for several days into his own eye, without causing the disease. Mr. Lawrence is inclined to consider the power of infection as very doubtful, but gives instances in his lectures, in favour of both sides of the question.

"The disease is not epidemic now among the English forces, but as happens in the Prussian Army, individual cases occur pretty frequently: in private life, on the contrary, it is much more frequent in England than in the countries near the Rhine, or any others in which I have been. The most violent form of the disease, with great swelling of the eyelids and excesssive purulent secretion, is either very rare, or as I learned from several practitioners, no longer exists. A great number of patients however come to the Eye Infirmaries, particularly to the Westminster, afflicted with the milder forms of the disease in its first and second stages, with excrescences (granulations?) from the eyelids, ectropium, opaque and vascular cornea, &c., besides the changes in the structure of the internal parts consequent on previous disease.

"The milder form in its acute stage, is treated in England by blood-letting, from twelve ounces, even to syncope, purgatives consisting of three to five grains of calomel, with ten, fifteen, or twenty of jalap, and followed by a solution of Epsom salts with tartarized antimony; besides leeches, cupping, blisters, with the application of cold or warm water to the eye, according to the feelings of the patient. In the more severe form the same treatment is pursued, but to a greater extent: in this case the opening of the temporal artery was formerly much practised, but many, and in particular

Mr. Wardrop, think it unnecessary and not preferable to venesection. Warm bathing and small doses of tartarized antimony are here of considerable service, and if the disease is seen at an early period, much advantage is derived from giving it as an emetic. Evacuations and counter-irritation are employed from time to time, and Mr. Travers approves of local emollient applications in this stage.

"In the treatment of the chronic form, which is so much disposed to relapse, all agree that it is absolutely esssential to remove every particle of the granulation: but as to the best manner of effecting this object they are divided into two parties, the one adopting a mild, the other a more irritating plan. In the case of granulations with opaque and vascular cornea, Mr. Guthrie employs Vin. Opii, strong solutions of Nitras Argenti and the blue stone in substance. If ectropium succeeds the fungous growth from the conjunction of the eyelids, he treats it with sulphuric acid or Nitras Argenti. He also frequently scarifies the eye, the bleeding being encouraged by warm fomentations. When the cornea is vascular he divides the vessels with the knife, and then employs the same measures. I have never seen him cut away the granulations. Evacuations and counter-irritation are not neglected.

"At the London Eye-Infirmary, Messrs. Lawrence and Tyrrell proceed quite differently. Their ordinary local application is a solution of alum in water, four grains to an ounce, or the Liq. Plumbi Acet.—I seldom saw Tincture of Opium (Query Wine?) employed, and almost always with bad results, so that the alum solution was soon resumed. Cupping and leeches, according to circumstances, blisters, issues, and setons to the temples, were employed more frequently than by Mr. Guthrie, and with benefit. The excision of the granulations, Mr. Lawrence considers so unnecessary and so injurious, that in his lectures he does not enter into the details of the process; and in this opinion Mr. Travers coincides.—The latter has found bark and acids very useful, as well in this stage, when there is a relaxed state of the vessels, as in the acute one, when gangrene or suppuration of the cornea is to be feared, or has actually taken place: in the latter cirumstances in particular I have seen the best results from their use.

"Either of these processes, exclusively adopted, must be injurious, the latter however much less so than the first, the results of which were much less favourable.

"The intelligence communicated by Sir W. Adams (Sir W. paid a visit to Germany a year or two ago), that the disease was generally treated in England according to his method, is wholly false (*ganz falsch*); the case is rather the very reverse, but, in a scientific point of view, he does not stand very high in the estimation of his professional brethren. As to his secrets which he has not yet communicated, and will not disclose until the treatment of the troops afflicted with this disease has been secured to him, and which also those only are to know who witness his practice in the Ophthalmic Hospital near the Regent's Park, it appears to me to

be altogether an empty pretence. During the whole of my journey with him, even before we came to Berlin, and under every possible circumstance, I could not detect any thing peculiar to him. I learned, too, from the military practitioners associated with him at the above-named Hospital, that he employed only the common and known mode of treatment, except that he insisted much more strenuously on the excision of the granulations (a peculiarity of which there is no need to deprive him), and then trusted almost wholly to the application of a saturated solution of blue vitriol, which he causes to be prepared warm, imagining that, in this way, it will also be more concentrated when it cools. This solution is applied by a brush, and repeated as often as the irritation of the former application has nearly subsided. Sir W. Adams has also, but seldom, treated acute cases in his Hospital, which is principally filled from other establishments, as Chelsea and Greenwich.

"The principal points on which Sir W. Adams insisted, in order to extirpate the disease from the Prussian army, were—1. A complete separation of such patients as had the least appearance, in one or both eyelids, of any remains of the disease; for which purpose, both lids were to be carefully inspected, and the upper, in particular, to be wholly everted—a process which Dr. Müller, among others, had already described. 2. Minute inspections, from time to time, by physicians appointed for that purpose, of all the regiments, to effect the complete separation of those in which the disease had again appeared. And, lastly, careful examination of all recruits, with a quarantine of all convalescents after leaving the hospitals.

"He was therefore not a little surprised when he learned that these rules had long been adhered to in the Prussian army."

"*London, April* 4, 1823."

*French Experiments on Morphine**.—The investigation of the qualities of the salts of morphine appears to continue to be a favourite subject among the French, although if it were not manifestly unfair to repress any thing in the shape of experimental inquiry, we should be strongly inclined to think that more time and attention had been devoted to this point than it really merits.

This investigation should be considered and conducted under two distinct points of view: 1. As regards the use of morphine and its salts in the practice of medicine; and, 2dly, The study of their effects in connexion with medical jurisprudence. The first has already received a considerable share of attention; but the second, which to us appears infinitely the most important, has hitherto been comparatively neglected. It is more particularly for this reason, that the pamphlet at the head of this ar-

* Recherches et Expériences sur les Effets de l'Acetate de Morphine. Par MM. Deguise, Dupuy, et Leuret. Paris, 1824. p. 7, 8.

ticle deserves consideration; it forms the sequel to some researches on the acetate of morphine, already published by the same authors, and professes to contain an account of its poisonous effects; of the means of recognizing it; and of the causes of the symptoms it produces.

The experiments of the authors were performed upon dogs and cats, and a detail of them occupied nearly the whole of the Essay. We, however, must pass over these, and confine ourselves to the indication of the principal conclusions resulting from them.

Of the Symptoms of Poisoning by the Acetate of Morphine.

The violence of the symptoms varies according to the species, age, and constitution of the animals subjected to its action. Stupor, sometimes amounting to a state of stupidity, and affection of the power of motion, were observed in all the experiments. Shuddering was frequently the first evidence of the action of the poison; this was often succeeded by general convulsions and paralysis of the posterior extremities; in some instances these symptoms continued, in others there were remissions of variable duration. The paraplegia, however, was pretty constant, and was more marked in proportion as the poisoning was serious. The last observation was also applicable to the stupor and torpor which appeared at various periods, and sometimes ceased for a time, soon to return again; they were not always accompanied by blindness or deafness; in fact, as regards the function of hearing, the authors remark, that animals apparently stupified were often alarmed by the slightest noise.

Dilatation of the pupil, considered by some authors as a certain sign of narcotism, was not uniform; on the contrary, in many cases, the pupil remained unaffected, though the other symptoms were most decided.

In most cases, more or less foamy slaver escaped from the mouth; this appearance sometimes preceded every other symptom; it was often attended by motions of mastication; but when analysed, the fluid did not present any trace of the poison.

The examination of the bodies, performed at different periods after the ingestion of the poison, did not discover any traces of inflammation of the alimentary canal: so that the vomiting and evacuation by stool, so often observed, could not be attributed to that cause: the authors having witnessed the spasmodic contractions of the muscles, of the pupil, &c., reasoning from analogy, conclude that the phenomena in question should be attributed to a corresponding affection of the contractile organs contained within the abdomen.

During the first moments succeeding to the ingestion of the poison, the pulsations of the heart were tumultuous, and could

not be counted; they soon became full and slow, and in severe cases presented more or less intermission; the body at the same time losing its heat. The authors also observed a difference between the force of the pulsations of the heart and those of the arteries, and ask whether this effect should be attributed to the inspissated state of the blood, or to the effects of the diminution of the nervous influence on the circulation in the capillary vessels. They lean to the first opinion, having observed the blood in one case to be preternaturally thick.

When respiration was affected, it was slow and uninterrupted, or accompanied with complaints and cries; in two cases, cats made the peculiar purring noise, which is considered as a proof that they are pleased, and which the authors refer to a state of intoxication, like that experienced by opium-eaters.

The examination of the bodies did not present any appearance which could be considered peculiar to poisoning by the acetate of morphine; the most common, a slight injection of the arachnoid, was not observed in all cases.

On the other hand, however, by means of chemical analysis (conducted by M. Lassaigne), the presence of the poison could be detected in the stomach, which, together with the nature of the symptoms, would of course always be sufficient to prove the cause of death. The authors, however, add, that the only decided proof of the presence of the acetate of morphine consists in obtaining the crystals from the contents of the stomach, and that the orange yellow colour produced by the addition of nitric acid (a test commonly applied to discover the acetate of morphine), cannot be depended upon, inasmuch as that acid produces the same appearances with two other vegetable alkalies, viz. strychnine and brucine. In a medico-legal point of view, however, we think that this is of less importance than the authors appear to suppose; for, in the first place, the nature of the symptoms would frequently enable us to assure ourselves which of these substances was present; or, secondly, if this were not the case, it would answer all necessary purposes to be able to assert the existence of one of three active poisons, although we might be unable to pronounce which.

In order to discolourize the liquids suspected of containing the acetate of morphine, the authors recommend the fluid subacetate of lead, a few drops of which are to be poured into an aqueous solution of the alcoholic extract obtained from the suspected substances. The colouring and azotic principles are precipitated, and the supernatant fluid, which retains but a very slight colour, contains only some alkaline salts, not decomposable by the metallic solution; the acetate of morphine; and a little excess

of the subacetate of lead made use of: the latter is to be separated by means of a few bubbles of sulphuretted hydrogen gas. If the transparent solution now remaining were to be evaporated by heat, it would inevitably become coloured again; the authors, therefore, recommend a very elegant process, which obviates this inconvenience, and which consists in placing the solution in the vacuum of an air-pump, close to a vessel containing concentrated sulphuric acid. In this way the saline principles are obtained without any foreign colouring matter, and it becomes easy to determine the presence of the acetate of morphine by the action of nitric acid.

The authors found in some of the cases that although poisoning took place from the acetate of morphine, yet it was not possible to detect its presence after death in the stomach, in the blood, or other fluids. Hence they are naturally led to enquire in what manner it disappears. According to them it may either pass into the intestines, or it may be absorbed, or lastly, its nature may be changed. As to the first, they deny that it enters the intestines, when introduced into the stomach, and appeal to their experiments in proof of this assertion. As to its absorption, particular circumstances prevented them from making any direct experiments upon this point, but they seem inclined to deny its occurrence. The vena porta is of course the channel through which it might be expected to enter the system, but in dogs and cats, (the animals on which they operated,) the quantity of blood contained in it, would have been too small to have led to any sensible results. To have made experiments on larger animals would have required enormous doses of the medicine, the high price of which would then have been an object of importance. They think it probable that the most careful analysis of the blood of the vena porta would not afford any trace of the poison. The sentence in which they make this assertion evidently contains some error; for in one line the authors are made to say, that probably it (the analysis) would not afford any such result, and in the next that it positively has not.—M. Barthelemy, of the Veterinary School at Alfort, has however performed this experiment, and in a single case detected some atoms of morphine in the blood of a horse, into which thirty grains had been injected ten minutes previously.

Only one manner of accounting for the disappearance of the acetate of morphine from the stomach remains, and that is the supposition that it is digested like other vegetable substances: there are many probabilities in favour of this opinion; the authors found that the acetate of morphine was less active when placed in contact with a mucous membrane than when adminis-

tered in any other way; opium is well known to be much more energetic in its action, when injected into the rectum, than when taken into the stomach; and, finally, herbivorous animals are peculiarly insensible of its operation. As to the real mode of action, of the acetate of morphine, the authors hazard the idea that it is through the medium of the nerves of the part to which it is applied, although they confess that this suggestion must be allowed to be wholly hypothetical.

The acetate of morphine introduced into the cellular substance produced more serious symptoms than when taken into the stomach, and this was still more the case, when it was injected into the abdomen or thorax.

Not having been able to detect the acetate of morphine in the blood, even when it had been injected into the veins, the authors were led to enquire whether any decomposition took place when these two substances were mixed out of the body. M. Lassaigne investigated this part of the question, and found that the acetate of morphine is actually decomposed by the soda contained in the blood; the acetic acid having a greater affinity for the mineral alkali combines with it, and quits the morphine, which divides into two parts, of which one is precipitated, whilst the other remains dissolved together with the soluble principles of the blood.

Some experiments, in which the poison was directly applied to various parts of the nervous system, such as the crural nerve, the brain, the cerebellum, appear to strengthen the supposition, that this system is the medium through which it acts. The effects of the poison appear also to demonstrate a specific action on the brain; but the authors differ from M. Flourens, who supposes that this action consists in producing a state of congestion: on the contrary, they found that though the injection of the capillaries was sometimes observed, in others it was wanting, and cannot be considered as a phenomenon uniform in its occurrence.

M. Martinet *on the Oil of Turpentine in Sciatica, &c**.—The oil of turpentine bids fair to rival the miraculous virtues of tar water as recommended by the celebrated Bishop Berkeley. Besides its really great efficacy in the expulsions of tænia, and its more dubious claims in the treatment of puerperal fever, M. Martinet strongly advocates its employment in sciatica, and other forms of neuralgia in the extremities. In 1818 he published some facts relative to its utility in such forms of dis-

* Memoire sur l'Emploi de l'Huile de Terebinthe dans la Sciatique et quelques autres Neuralgies des Membres, Par L. Martinet, M. D. &c. Paris, 1823.

ease, and since that period he states that new and numerous observations have confirmed the results of his original researches. Other physicians, particularly MM. Andrieux, Tavernier and Jacob, have also successfully employed this mode of treatment, and their experience agrees with that of M. Martinet.

The first chapter of this little pamphlet contains a collection of cases from various sources, in which turpentine was successfully employed in the treatment of various kinds of neuralgia. In the second, M. Martinet treats of the mode of action, of the oil of turpentine, its administration, &c.

"The essential oil of turpentine," says he, "presents considerable differences in its mode of action, according to the dose in which it is employed: in the case of sciatica it gives rise to some particular phenomena, which are only observed in the extremity affected. In the dose of a scruple, it generally begins to show its peculiar effects about half an hour after it has been swallowed. The pharynx and œsophagus are affected with a feeling of warmth which soon extends to the stomach, intestines and lumbar region; a similar feeling being propagated to the limb affected, particularly in the course of the sciatic nerve. General perspiration is not common, nor is that of the limb increased."—p. 18.

"In the same dose it also produces loss of appetite, nausea, weight at the stomach, and indigestion: sometimes the urine is more copious; at others its emission is difficult or attended with heat, but these phenomena are far from constant, and never last above a few days."—"The stimulant action of the turpentine is more decided in proportion as its quantity is increased. In a dose of two drachms, up to an ounce, it causes nausea, vomiting, colic, heat, tenesmus, purging, and sometimes a real gastro-enteritis attended by more or less fever. The urinary passages commonly participate in the excitement of the alimentary canal, producing more or less irritation of the kidneys, extending to the bladder, and urethra, with dysury or even stranguary"—p. 19.

These accidents M. Martinet remarks, have only been observed when the oil of turpentine has been administered in very large doses, such as one or two ounces. He has often known the patients to take two drachms at a dose without experiencing any other inconvenience than colic, vomiting, heat at the stomach or purging, rarely stranguary. The brain from its sympathy with the stomach sometimes experiences certain derangements, such as vertigo, intoxication, headache, redness of the face, more particularly in women and nervous irritable subjects. "Even in large doses this medicine is sometimes observed not to produce any sensible effect."

To prove this fact M. Martinet adduces a case related by a Dr. Weaver, in the Medical Repository, in which an epileptic

female took upwards of two ounces a day during eighteen days, without any other effect than slight nausea. M. Martinet thinks proper to remark in relation to this and some other facts of the same character, that in England in general, irritability, and particularly that of the mucous surface of the alimentary canal, is far from being so much developed as in France, and more southern countries. This is a very pretty piece of theory to be sure, but unfortunately it appears to rest on a very unsteady basis. In relation to this and some other propositions of a similar stamp, it is well to bear in mind, as a general proposition, that nature is uniform in her operations, but that the opinions of men are liable to vary with time and place. In the present case of course it would be a very convenient circumstance if the hypothesis could be established, as it might serve to afford an explanation of the advantages arising from the use of purgatives, &c., by the practitioners of this country; advantages which our French neighbours sometimes pretend positively to deny; at others, when they find the facts so uncomplaisant as not to bend to theory, attempt to explain away by invoking the assistance of some such probable and well founded hypothesis as M. Martinet has here suggested.

"The advantages following the use of the oil of turpentine cannot," says M. Martinet, "be attributed to the increased flow of urine, or the secretion from the skin. Nor does it depend upon the excitement of the alimentary canal, because these phenomena do not always take place, and because much more powerful stimulants do not produce the same effects. In fact, if the medicine acts as a diaphoretic, purgative, or diuretic, it generally fails in curing sciatica."—p 30.

M. Martinet has quoted several cases and observations from the Clinical Experiments of Dr. F. Home, and appears to coincide with him in supposing that the good effects of the medicine are to be attributed to a peculiar action upon the nerves, and that it acts in the same manner as blisters applied to erysipelas, by changing the mode of action of the part affected. In fact, one of the most remarkable consequences of its employment consists in a sensation of heat in all the parts to which the affected nerve is distributed, together with an increased activity of the capillaries, sometimes so great as to produce a local perspiration. Whatever may have been the violence or the duration of the disease, it rarely happened to him but that it was either cured, or, at least, considerably relieved, whenever this sensation was perceived. Exteriorly applied, the oil of turpentine, according to M. Martinet's experience, does not excite any sensation of heat in the course of the nerve, but merely in

the parts which it touches. This is stated by some patients to amount to a feeling of burning; the skin becomes tumid, red, and very sensible.

Mode of administration:—

"The result of a great number of facts," says M. Martinet, "have convinced me that it is necessary to combine the oil of turpentine with some suitable excipient; in so doing, its immediate contact with the mucous membrane of the stomach is prevented, and the different accidents obviated which might be the result of such an occurrence."

The vehicles which he chiefly recommends are, honey, gum arabic in powder, and different syrups. Of the combination of oil of turpentine with *honey*, however, he remarks, that the mixture is so disgusting and disagreeable, that patients refuse to continue the use of it. For that reason, he prefers aromatic syrups or inert powders, for the purpose of masking the nauseous taste of the medicine. In some cases where the stomach cannot be brought by other means to retain the oil, the object may be accomplished by administering it in combination with a suitable quantity of opium or laudanum to each dose. When the oil of turpentine is applied externally, it must be mixed with axunge, aromatic oils, and, if necessary, with the liquid laudanum of Sydenham: the affected parts are to be rubbed with the mixture several times in the day.

Cases in which the oil of turpentine is indicated:—

"*Cæteris paribus,*" says M. Martinet, "this medicine proves more successful in sciatica than in any other case; it may, however, be also employed in various other forms of neuralgia of the upper or lower extremities, whatever may happen to be the duration of the disease, or the nature of the cause which has produced it, provided, indeed, that it does not depend upon any organic disease, or any constitutional affection fixed in the sciatic nerve, such as a venereal taint, for instance; in such a case, it would, of course, be proper to commence with a mercurial treatment. Whatever measures may have previously proved unsuccessful, if the pain be very severe, if its course along the line of the nerve be distinctly marked, if the paroxysms be very severe; in a word, if the disease assumes all the distinguishing characters of neuralgia, the chances of success are the more favourable."—p. 44.

As to the precautions necessary to be observed in administering the oil of turpentine, M. Martinet remarks, that if it gives rise to any of the accidents already enumerated, it will, of course, be proper to suspend its employment; and if they be severe, to combat them by the tepid bath, diluting drinks, &c. If there exist any previous irritation in the urinary passages, it must be removed by suitable treatment, and the medicine must not be

employed until tranquillity is restored. If no advantage results from its employment during eight or ten days, it will be proper to abandon it, in order to avoid an unnecessary irritation of the stomach, or even the development of more or less severe inflammation. As the effects of the medicine are decided, the practitioner is not exposed to any doubts, as one or two doses will generally suffice to shew what may be expected from it. In most of the cases in which it succeeded with M. Martinet, not more than five or six days were necessary either to obtain a cure or a marked degree of relief.

M. Martinet does not propose the medicine as a novelty, or as infallible. It has already been proposed by Cheyne, F. Home, and long employed by Professor Recamier, at Paris. M. Martinet has subjoined a considerable number of cases from his own practice, and that of others; in many of these it proved completely successful, in others it produced considerable amelioration, and in a much smaller number it was altogether unsuccessful.

VII. MIDWIFERY.

Cæsarean Operation. By Dr. Oesterlein, *of Oehringen* *. —Although unsuccessful in its result, the relation of this case presents so many points of interest, that we are gratified in the opportunity of presenting it to our readers.

"Elizabeth Moekistin, of Pfedelbach, in Oehringen, unmarried, aged 28, had been ricketty from childhood, the skeleton not only being hindered in growth, but rendered diseased and distorted. She might fairly be considered as a half Cretin, not only from her deformity, but from her intellectual deficiency. Excepting an asthmatic cough, however, she was in tolerable health. According to her account, she was forcibly impregnated by an unknown person in the evening, in April 1820; neither she nor any one else were aware of the existence of pregnancy, and after working one day as a spinner for some neighbouring villagers, she returned to her mother, a poor widow, on the 24th November, as she felt some commencing pains. These continued slightly until the night of the 29th, when true labour pains began, and became very forcible, but were considered by the midwife as merely spasmodic, because the waters had not escaped, and because she was unable to discover the os uteri. Notwithstanding, she desired the assistance of a professor, seeing that the deformity of the patient was such as to render delivery impossible: to this however the patient and her mother would not consent. About eleven, on the night of November 30th the water escaped; the pains continued through the night, until ten in the morning of December 1st as the head remained unmoved,

* Graefe und Walther's Journal, B. 4ter. 1 stes. Heft.

and as the patient and her pains became weaker, the mother consented to my being called. I arrived at half-past one, *p. m.* The patient was sitting in bed, had cough and difficult breathing, but was otherwise well. The pulse was feverish, but she had an appetite, and no particular thirst. The pains had ceased since ten o'clock. By examination, I discovered the following circumstances :—

" 1st, The patient's height was four feet one inch. 2d, The chest and the vertebral column, so far as the neck and back were well formed, but the latter in the two last vertebræ was bent considerably to the right side, and projected inwards. 3d, The lumbar vertebræ with the sacrum were pressed forwards and over to the right side. 4th, The posterior part of the sacrum presented, not a convexity, but a pointed projection. 5, The bones of the hips and the trochanters were tolerably distant. 6, The convexity of the ossa pubis was turned inwards towards the cavity of the pelvis, instead of outwards : this was particularly the case on the right side. 7th, The promontory of the sacrum was not in the middle, but projecting into the lower part of the pelvis on the right side, and easily to be felt with the finger. 8th, The whole of the lower part of the pelvis was so distorted and compressed, that the deformity could be easily ascertained by the introduction of the hand. When the middle finger was placed on the promontory, the point of the fore finger reached easily to the ramus of the right os pubis, and this distance was at most an inch and a half; on the left side it was about an inch more. The conjugate diameter from the middle of the promontory to the symphisis pubis was scarce two inches, and that in an oblique direction, from the displacement of the sacrum. 9th, The distance from the promontory to the points of the coccyx was scarce three inches. 10th, The external parts and vagina were in a natural state. 11th, The os uteri was tolerably dilated. The head lay above the brim of the pelvis immoveable, and not tumefied. The sagittal suture lay across the pelvis, but it was not possible to ascertain the situation of the face. 12th, The uterus could be felt high in the upper part of the abdomen, and almost wholly on the left side. The space between the umbilicus and pubis appeared empty. The abdomen and uterus were painful to the touch."

Dr. Oesterlen judged the Cæsarean operation the only means of effecting delivery, and having proposed it to the patient and her friends, was surprised to meet an immediate assent. He concluded that they had some previous knowledge on the subject, and was afterwards confirmed in his suspicions by finding an old book of midwifery in the house, containing a plate with a representation of the operation. He fixed the operation for the following morning at nine, and in the interval requested the assistance of Drs. Lang and Ott : they both coincided in opinion with him : the conjugate diameter was estimated by the latter at one and one-half inch ; by the former at nearly two inches :

the distance from one ischium to the other was fixed by both at two inches.

"At three *a. m.* of Saturday, December 2d, I was informed that the patient complained of violent pains in the belly and limbs; that there were alternate rigors and flushings; and that she could not be kept in bed. She earnestly wished for the operation, and I was desired to hasten as much as possible. On my arrival at seven *a. m.* the fever had ceased, but the patient suffered much from cough, difficulty of breathing, and pains in the abdomen. The pulse was quick and small; the situation of the head as before; and some blood had escaped from the vagina. Little as was to be expected in these circumstances, I undertook the operation, as being the only means of relief; as the patient and her friends made no objections; and as she assured me that she felt the motion of the child.

"I commenced the incision two inches above, and two inches to the left side of the navel, cutting through the skin and muscles at once, and ending four inches below the navel in the linea alba. The peritoneum was thus exposed in some places, and I opened it cautiously in the middle of the incision, when a tolerable quantity of serum escaped. I introduced my finger into the opening, and enlarged it upwards and downwards. The uterus now presented itself, of a hale red colour: I cut obliquely through it for about an inch at its upper part, and thereby exposed the placenta: I introduced my finger into the opening in the uterus, and enlarged it to the extent of five inches. The placenta lay on the anterior surface of the uterus, from which it was almost wholly detached, but without any bleeding having taken place. I pushed it to one side, and seeing the breech of the child, seized the feet and delivered it easily excepting the head; this would not pass, and to allow its extrication I was obliged to enlarge the wound about an inch. The intestines now pressed from all sides through the wound, and could scarcely be retained by the hands smeared with oil. Without dividing the funis, I separated the remaining attachments of the placenta, removed a few coagula from the uterus, and pressed the gaping edges of the wound in it together with both hands. I then approximated the edges of the wound in the abdomen, carefully reduced the protruding intestines, and made three sutures. The interspaces were brought together with long adhesive plasters; pledgets dipped in oil were laid over the wound, and the whole retained with a bandage. During the whole operation, which with the dressing lasted fourteen minutes, it was not necessary to tie any vessels, and scarce half a cupful of blood escaped, not even during the division of the uterus.

"The patient bore the operation without complaint; the child was dead, and the cuticle in some places separated, a sufficient proof that it had ceased to live for some time.

"Immediately after the operation the patient was seized with a fit of vomiting and coughing, so forcible, that if a number of hands

had not been applied to the abdomen, the sutures would infallibly have been torn out. She complained of constriction of the chest, shivering and cold sweats; the pulse was small, quick, and tremulous. These symptoms ceased after a dose of laudanum, c. liq. c. c. succinat; but only for a short time: in two hours she became delirious, the tightness of the chest, restlessness and debility increased, and at three *p. m.*, about six hours after the operation the child died.

"Permission was with extreme difficulty granted by the mother to make an examination on the following day, but on the express condition that it should be confined to the abdomen, she being herself present all the time.

"*Dissection.*—The following were the appearances: the length of the external wound was about eight inches; all the viscera, the uterus excepted, appeared sound, and the intestines had regained their natural situation; the uterus was of a pale red colour, the edges of the wound in it were in the middle one and one-half inch asunder; it contained a little coagulated blood; its inner surface was in a gangrenous state, but its substance was thick and firm; the incision in the uterus was nearly seven inches long, and ended an inch and half from the insertion of the vagina; the insertion of the Fallopian tube was on the left side two inches distant from the wound, on the right side but one; in the pelvis were found about three ounces of bloody fluid. When the soft parts were as much as possible separate from the bones, the great deformity of the latter was more distinctly seen, and was such as scarcely to admit of description: they were compressed and thrust together from before and behind; the lumbar vertebræ, together with the sacrum were thrust forwards, and projected far into the upper aperture of the pelvis; the sacrum was unusually curved, and instead of presenting a flat excavation inwards, formed an acute angle. The ossa pubis were soft, cartilaginous, and united by ligaments; the os coccygis was immoveable. The great diameter of the upper aperture of the pelvis was four inches nine lines; the small was two inches three lines, not reckoned, however, from the promontory of the sacrum, which was depressed and turned to the right side, but from the fourth and fifth lumbar vertebræ. The distance of the ramus of the right os pubis from the promontory was one inch two lines; of that of the left from the same point, one inch nine lines; from the right sacro-iliac symphisis to the left ramus of the os pubis, four inches two lines; the same diameter on the opposite side, three inches five lines; the greater diameter of the lower aperture of the pelvis, two inches five lines; the lesser diameter two inches seven lines; the height of the sacrum with the os coccygis, two inches eleven lines; the hollow of the sacrum, one inch four lines; the distance of the spinous processes of the ossa, two inches four lines."

The clear and candid manner in which the above case is related, deserves every commendation, and reflects much credit

on Dr. Oesterlein. At the same time it is impossible to avoid remarking, that an unnecessary and prejudicial length of time was allowed to elapse between the determination on the propriety of the operation, and the period at which it was executed, particularly if the previous duration of labour be taken into consideration. Dr. Oesterlein saw her at half-past one, *p. m.* of December 1st, and then judged the operation the only means of relief; it was not performed until nine *a. m.* of the next day, a period of nearly twenty-four hours; and for this unjustifiable, and possibly fatal, procrastination no reason of any kind is assigned.

Extirpation of the Cervix Uteri.—The operation was performed by the removal of a cancerous induration, attended with pain, frequent bleeding, ichorous discharge, and hectic fever. The vaginal posture of the uterus was converted into an uneven, but well defined tumour, three inches in diameter, as hard as ivory, and bleeding on the least touch. In the operation, Professor Graefe employed scissars, with long handles, curved on their flat surface, and having rounded points. By means of many small incisions with this instrument, the neck of the uterus was separated in every point from the body, and extracted. A common spunge, soaked in cold water, sufficed to stop the bleeding. On the third day considerable inflammation ensued, extending from the uterus to the bladder and rectum, but was reduced by bleeding, and calomel combined with laurel-water. The discharges diminished from the twelfth day, and had ceased in the fourth week. Some time after the operation, repeated examination proved that the disease had not returned, and that the vagina and cavity of the uterus formed one uninterrupted surface. In the fifth week, the patient (who was aged 54,) left the institution. She was seen again at the end of two months, had not had any return of fever, pain, or discharge, and was in every respect perfectly well.

VIII. MEDICAL JURISPRUDENCE.

Beck's *Medical Jurisprudence.*—Our readers who were interested with our extracts from Professor Beck's great work will be gratified to learn, that it is now reprinting in a cheap form, as a text book, with notes and illustrations, by Mr. Dunlop, whose lectures on Forensic Medicine, in Edinburgh, attracted so much notice. The work will thus be rendered not only the cheapest,

* Auszuz aus dem Berichte über das clin. Chir. Aug. Institut. der Universitat. zu Berlin für das Jahr. 1823 Graefe u. v. Walther's Journal, 6ter B. 1stes. H.

but the most copious and minute in the detail of cases, and of scientific principles, of any in the English language, and will immediately take its place as the standard text book for the students of medicine and law, and the standard book of reference for practitioners of medicine, and for barristers and coroners.

IX. CHEMISTRY, PHARMACY, AND BOTANY.

Under this head we have nothing to record, which our readers would consider of any medical interest.

X. MISCELLANEOUS.

The Society of Physicians of the United Kingdom.—Under this denomination, a few practitioners of the metropolis, discontented, it would appear, with the Royal College of Physicians, have published a programme, followed by rules in the form of resolutions, by which they exclude from their society all their brethren who are engaged in the practice of surgery, pharmacy, or midwifery, and all who have not studied regularly, and taken degrees at some medical university, except members of the London College, prior to the year 1800.

Out of good feeling to the gentlemen whose names are appended to this most unprofessional-like document, we forbear to publish them; as we are convinced they will themselves feel ashamed of it, and give up the silly project at their next meeting in October. If they do persist in publishing their resolutions, they can expect nothing but contempt from every rational and liberal practitioner, whom they indirectly insult by so doing. We are glad to see that the other Medical Journals have expressed similar opinions respecting this new society.

Print of Mr. John Hunter.—Mr. Anderson has just published a fine lithographic print, by Mr. Allport, of Sir Joshua Reynolds's portrait, of this celebrated surgeon and physiologist. The artist has caught the expression of the countenance admirably, and there is altogether a softness and delicacy, and at the same time a spirit in the shading which cannot fail to render it popular among Mr. Hunter's admirers.

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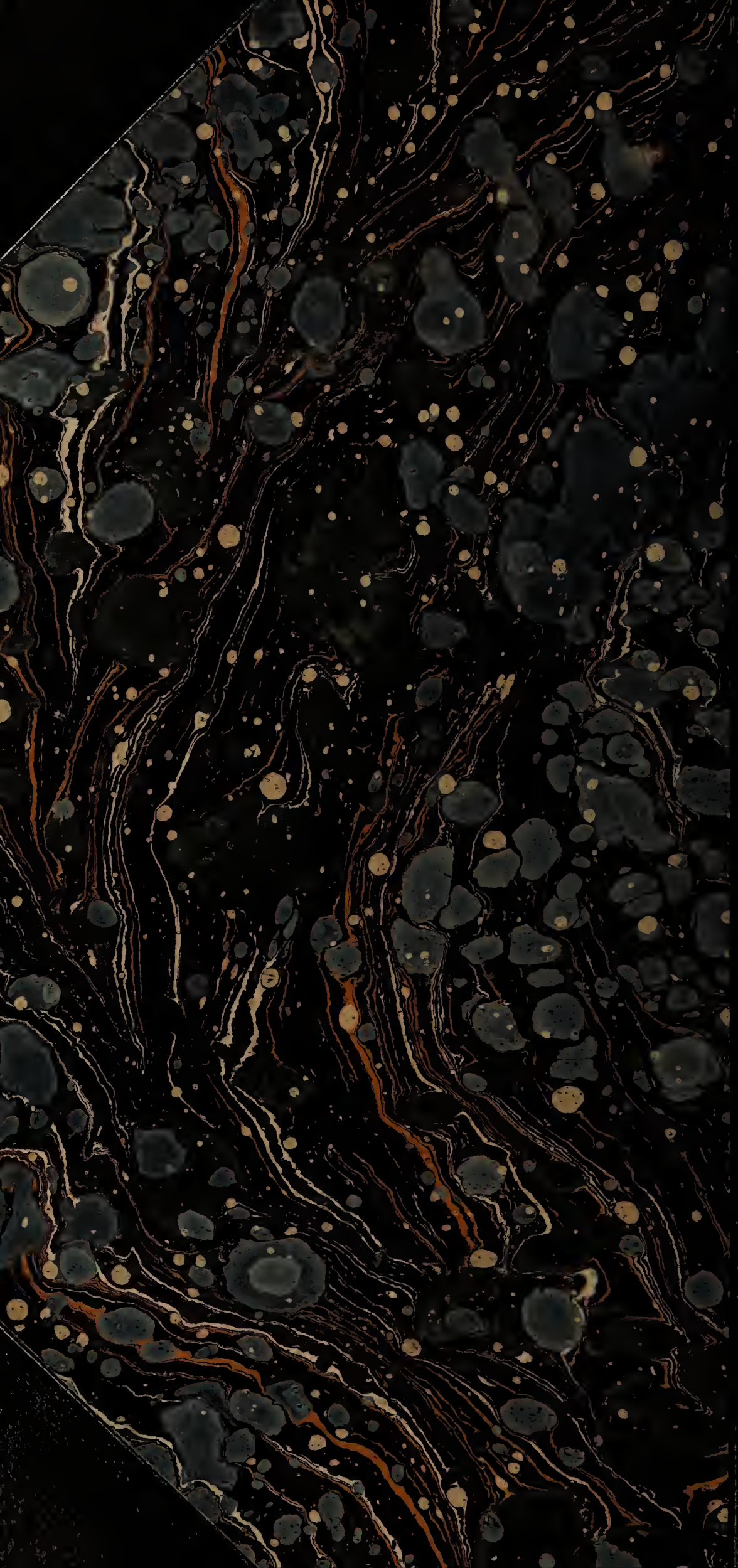
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